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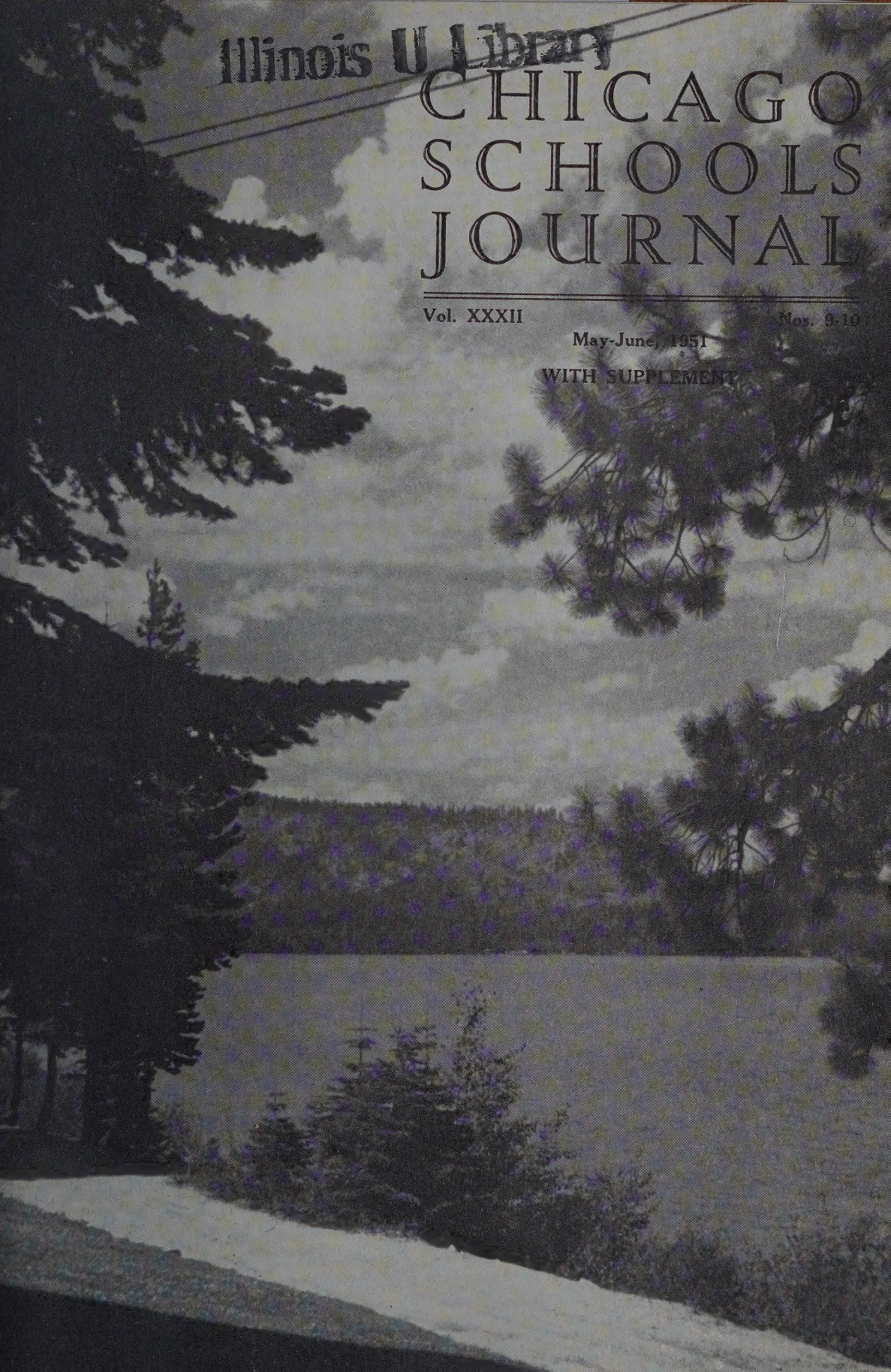
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ATOMIC ENERGY AND WORLD ECONOMY¹

GORDON DEAN

CHAIRMAN OF THE U. S. ATOMIC ENERGY COMMISSION

ATOMIC energy first found its application in a military way and is being developed very largely in secret and under government control. Its military application is still its dominating characteristic and, because of this, it has been isolated from the operation of some of the normal economic forces, and may remain so for some time. Any estimates of what its ultimate role in world economy will be, therefore, must largely be based upon conjecture. As of today the role of atomic energy in this nation's economy is more negative than positive. That is to say, our atomic energy program is taking more out of the wealth and resources of our country than it is putting in.

There is nothing that illustrates this point more vividly than the fact that the Atomic Energy Commission has recently entered into a contract with a new company called "Electric Energy, Inc.," whereby the company will supply approximately one-half of the power needs of the Commission's new uranium separation plant to be built near Paducah, Kentucky. To do this the firm will have to build a new steam plant to generate power here in Illinois, near Joppa, in the south of the state. When the day comes that a company called "Atomic Energy, Inc.," is formed to provide power for the electrical systems of this country we will be in a much better position to discuss intelligently the positive impact of atomic energy upon our economy. The fact remains that while the world ultimately looks to the atom to produce power the atomic energy program is today the largest single consumer of power. This is not a pleasant fact but it is a fact.

We have, then, two phases of atomic energy development. One, the phase we are in now, where atomic energy development is largely (and I think necessarily) controlled, and its impact is largely negative; and two, the phase we shall inevitably reach at some point in the future, where atomic energy will be unfettered and its impact will be largely positive. This will be the phase in which atomic energy will add to the wealth of the world. There are a great many variables in any determination of just when this day will come, and some of them are variables over which we in the Atomic Energy Commission have little control.

There are, of course, some variables over which we do have a measure of control. One of the most obvious of these is the rate of our progress in technological research and development. Under the present system of control in this country it is largely up to the Atomic Energy Commission itself, or to others operating with our consent and aid, to prove the technical feasibility of using atomic energy for important industrial and other peacetime purposes. I would like to say we are mindful of this responsibility and that we are doing everything within our power that is consistent with our paramount objectives of defense and security to speed the day when atomic technology will produce something of significant value to industry.

Our two sets of objectives, those having to do with defense and those having to do with peacetime economy, are not unrelated. Most of what we accomplish in the one area is of definite value to the other.

¹Adapted from a speech given at the Northwestern University Centennial Celebration, February 28, 1951.

We are, therefore, along with our weapons work, and partly because of it, advancing toward the day when the technical feasibility of utilizing atomic energy for industrial and other purposes will be demonstrated. We have every hope and every reason to believe that such a day will arrive.

PRESENT NEGATIVE ROLE

Before we look more closely at the role atomic energy may play in our future economy, let us examine the impact that it is having on our economy today, this negative impact. For how we handle the problems that confront us today will undoubtedly have a very important if not decisive bearing on the future.

To examine the negative impact of atomic energy development on our economy today is to raise some questions:

Is this impact too great? Are the returns we are receiving in the area of national security and the returns we hope to receive in the future in peaceful benefits worth the sacrifices we are making? These are particularly pertinent questions at this time when we are engaged in a tremendous expansion program.

Or, on the other hand, are our efforts perhaps not great enough? Could we safely be doing more?

To understand the setting in which these questions must be considered, it is helpful to understand the general nature of the atomic energy program and the factors which determine its magnitude. To do this let us visualize a schematic presentation in the form of a pyramid. The base of this pyramid is composed of raw uranium ore. Upward at succeeding levels are the great feed materials processing plants, uranium separation plants, plutonium-producing reactors, research and development laboratories, weapons facilities and testing areas—and throughout there is a vast accumulation of intricate and expensive equipment and highly trained people. At the peak are the end products: atomic weapons; isotopes for use in industry,

agriculture, research, and medicine; and a considerable amount of technological information of infinite value to tomorrow's economy.

As this pyramid is increased in size, something we are doing at a growing rate at the moment, points of resistance are met at a number of different places. There may, for example, be a shortage of reactor technicians at one point, thus limiting the overall size of the structure; or there may be a critically short material at another. Or perhaps there are too few skilled construction workers here, or a too-small capacity to supply vital equipment there. At each point where resistance is encountered it can be overcome, but sometimes at a very high price. For example, we may be able to obtain an adequate supply of some critical material only to find that we are taking it away from general industry or, more important, perhaps from some other vital part of the national defense effort.

Parenthetically I should like to give some idea of the magnitude of our expansion effort. To date, the Congress has appropriated more than 6 billion dollars for atomic energy in this country. Two of these 6 billions were appropriated during the current year, a sum comparable to the entire amount expended by the Manhattan Engineering District on atomic energy during World War II. In the personnel field alone it has been estimated that 5 per cent of the total scientific and engineering population of the country is engaged in atomic energy work. I have referred to some of the limiting factors which determine the size of our program. But the ultimate size is determined by ore. In other words, while our program might be made big enough—at a sacrifice—to handle almost any supply of uranium ore, the program is a pyramid and ore is the base. Uranium then is crucial.

URANIUM IMPORTANT

When one considers the future of atomic energy development it is encouraging to reflect that one part in each 250,000 parts

of the earth's crust is uranium. On this line of reasoning it can be pointed out that uranium is 1000 times as plentiful as gold, 100 times as plentiful as silver, and almost as plentiful as lead or zinc. One might ask, "If this is true, why don't we go all out to get this uranium out of the ground and into the form of bombs? Why are our activities limited to the relatively rich deposits?" We could do this if we were willing to pay the cost. We could, for example, and I choose this example fully aware that it is extreme, extract uranium from sea water. It is well known, for example, that magnesium is extracted economically from sea water. It is also known that in sea water there is uranium which has been calculated to occur at a ratio of about five tons per cubic mile. We could get this uranium. But let us consider, for a moment, what this would cost.

In the first place, magnesium is much more prevalent in sea water than is uranium. It has been estimated that if we were to build a plant the size of a normal economical magnesium sea water processing plant we would get approximately only 50 to 70 pounds of uranium from it per year. Two scientists, several years ago, calculated that to obtain uranium from sea water at a rate of 100 tons a year — enough to make it an interesting source — we would need a plant capable of processing 12 million tons of sea water per hour, and the cost of such a plant was estimated at in the neighborhood of 150 billion dollars. This, I believe anyone will agree, would be an uneconomic way of obtaining uranium.

The fact is that, although uranium composes one part in each 250,000 parts of the earth's crust, significant concentrations occur very sparingly. We now mine some deposits containing but 1 part of uranium oxide to each 1000 parts of ore. Like other minerals, those deposits which can be mined most economically, whether because of grade, accessibility, or the presence of other valuable materials in the ore, are mined first. Today the great bulk of our

supply of ore comes from those deposits in the Congo, Canada, and Colorado.

But where do we go from here?

EXPLORATORY PROGRAM

First, we have a program under way to stimulate exploration. We want to find other deposits, preferably high-grade.

Second, we are turning increasingly to lower-grade deposits. The most obvious of these are deposits where uranium can be had as a by-product of the production of some other valuable mineral. For example, we recently announced that the United States and the United Kingdom had entered into an agreement with the Union of South Africa whereby we will obtain uranium produced as a by-product of gold production. Pilot plants for the extraction of uranium are already in operation at some of the South African gold mines.

Third, we are vigorously pursuing a research program that we hope will produce economic methods for extracting uranium from such other very low-grade deposits as the phosphates.

And fourth, we have just increased the prices we pay for uranium in this country and the bonus we will pay for production from new mines. This is an important step. It will make production from lower grade deposits more profitable to the miner; it will stimulate development of known deposits whose extent is now still largely undetermined, and it will stimulate our exploration program.

Dr. Vannevar Bush in his stimulating book, *Modern Arms and Free Men*, said:

To build a large stock of atomic bombs is an undertaking that will strain the resources of any highly industrialized nation. The strain will be greater if very dilute sources of raw materials have to be utilized, as seems probable.

Mind that the most effective progress in the race will not come from throwing all of the country's resources directly into the making of weapons of war. In fact, that would be a sure way of losing in the long run. To win the race we must have a healthy people. We must raise

our standard of living so that more of our population may perform well. We must learn to make our industrial machine operate smoothly and avoid interruptions because of quarrels over division of the product.

Now, there is not the slightest doubt that we could thus overextend ourselves, and the corollary is that our military expenditures and our expenditures for aid to our friends must be made within reason, and with careful logic, correlation and economy. There is also no doubt that the most important thing for us to do, to maintain our full strength and bring the world back to sanity, is to keep our industrial and economic health, keep the machine running full blast without inflation or depression. Should we fail in so doing, the resulting distress in the world would play directly into the hands of those who would build on chaos.

PRESENT POSITIVE ROLE

Assuming that we handle ourselves successfully during this emergency period, let us look briefly at the potentially important positive role that atomic energy may some day play in world economy. To approach this intelligently, we should begin with the positive role today. For there is one. The total impact may be negative, but atomic energy nevertheless is already having a noticeable positive effect on our economy.

Today there are produced by the atomic energy programs of the United States, Great Britain, and Canada radioisotopes which may be purchased both in the countries producing them and abroad. These materials are not secret and the work that is done with them is not secret, although there is some measure of control over their use, largely for reasons of health and safety. Here, therefore, we have an example of a product of atomic energy that is being left relatively free to find its own place in world economy. We are still in only the very earliest stages of this development, but already we are beginning to see directions in which we are likely to go.

There are those who today see as the greatest contribution atomic energy will make to world economy the results of work with the radioactive elements and compounds that are produced in nuclear

reactors. For example, there has recently been completed a study by the Cowles Commission for Research in Economics of the University of Chicago under the auspices of the Social Science Research Council. In this report, which deals in an exploratory way with the economic aspects of atomic power, the authors — Sam H. Schurr and Jacob Marschak — have this to say:

Nor do we know what uses will be made of cheap radio-active elements and compounds, another product of nuclear fission. Perhaps the most important though less immediate applications will be due to the new knowledge of matter, both dead and living, which scientists hope to acquire by using radioactive "tracers." For example: if, helped by these new research tools, we learn to imitate the action of green leaves in absorbing the sun's energy, both uranium and coal may, at some time and for some countries, acquire a formidable competitor, and the effect on food supplies may be even more important.

The radioisotope by-products of the atomic energy program are tools which can be used in this research. It may well be that in this area atomic energy will make its most significant contribution.

USES OF RADIOISOTOPES

Already from the use of radioisotopes in industry some concrete developments have taken place. I should like to cite a few examples:

The Ford Motor Company is using radioisotopes to discover hidden flaws in metal castings and as accurate thickness controls in metal rolling.

The Standard Oil Company of California has recently placed on the market a new engine oil developed with the aid of radioactive piston rings which revealed the lubricating quality of the oil in development tests.

Rutgers University is developing a process for the study of soil density with radioisotopes with the ultimate goal of determining how soil density affects traffic damage to highways.

The University of Michigan is using radioisotopes to test the efficiency of various laundering techniques. In the experiment, radio-phosphorus is fed to bacteria; these are mixed with a soil preparation and this is smeared on two-inch-square cloths. After washing, the cloths can be "geiger-counted."

The U. S. Testing Company is using radio-cobalt to make comparative tests of wearing characteristics of floor wax.

The B. F. Goodrich Company is attempting to use radiophosphorus to trace leaks in the cooling line of an air conditioning system. The Goodrich Company also uses radioisotopes to test various types of tire treads.

Goodyear uses radioisotopes to measure the thickness of its pliofilm.

The Bell Telephone Laboratories have used radio-strontium in studying the penetration of preservatives in telephone poles with the goal of developing more efficient methods of extending the useful life of the poles.

The Quebec North Shore Paper Company has used radioactive iodine from Chalk River to make a continuing survey of the pulp solutions and substances working together at every mixture stage in the manufacture of newsprint.

Radioactive antimony is used to make the separation "faces" between different grades and types of gasoline, diesel oil, and stove oil carried in a single eight-inch pipeline from Salt Lake City to Boise, Idaho, and eventually to Pasco, Washington. With the radioisotope it is possible to chart the movement of the oils and gasolines, which do not blend because of differing densities, so that they can be removed at different tank points without intermixing.

These are only a few of the many industrial applications of radioisotopes. The effect of their use in this way is a subtle one, but it is one that will be felt increasingly in our economy.

In the field of agriculture radioisotopes have been used to determine the effectiveness of insecticides in killing insects and their effect on food; to find more effective ways of treating plant diseases; to determine the efficiency of various fertilizers and the most effective means of placement and use; to determine better and more efficient ways of feeding livestock, of breeding better livestock, and of keeping them in good health.

The physical well-being of the populations has a great deal to do with the economic health of a nation or of the world. As tracers, radioisotopes are helping scientists to understand life processes and mechanisms which have been only partly understood for lack of such a key

to unlock their secrets. With a better understanding of life processes will come a better understanding of how to keep the body free from debilitating and deadly diseases. Radioisotopes are finding an early practical application in diagnosis and in treatment.

URANIUM A SOURCE OF POWER

The tremendous amount of potentially releasable energy contained in uranium has made it an intriguing potential source of useful power. According to Schurr and Marschak one pound of uranium, fully consumed, would yield about $2\frac{1}{2}$ million KWH of electric power, which is equivalent to approximately 1,250 tons of bituminous coal.

As far as we can determine with the knowledge we have available to us today, it is not possible to convert fission energy into electric energy without passing through a steam or gas turbine. All we can replace with nuclear energy components in the conventional power plant, therefore, is the fire box and the boiler. All the heat transfer apparatus, the turbines, the generators, and the distribution system would remain the same. What we have then in uranium, as far as we know now, is a substitute for coal or natural gas or petroleum fuel in an otherwise similar system.

Uranium has some advantages — size — over other types of fuel and also some disadvantages — shielding — but ultimately the place it will find, unless some new technique or information is uncovered, will be determined by its relative cost in various areas as compared with other forms of fuel. But there is enough energy locked up in the world's uranium resources to have a definite impact on world economy when it becomes feasible to release it in the form of electric power.

The program of the Commission in this field includes: an experimental breeder reactor, to produce some useful power as a by-product; a submarine reactor which will give us the first use of atomic power

for propulsive purposes; and certain experimental reactors, such as the Materials Testing Reactor, which will add to our knowledge of how to build future reactors. The net result of these will be to demonstrate the technical feasibility of atomic power for useful peacetime purposes.

The use of nuclear reactors to produce useful amounts of power economically becomes much more feasible, particularly at this early stage of development, if the fissionable material produced in the reactor can be sold to the Government and the return applied to the cost of the power. This intriguing prospect has resulted in proposals from private industrial concerns under which the firms would be permitted to study the feasibility of developing and operating reactors for the production of plutonium and electric power.

The studies that will be undertaken as a result of these proposals will add much to our understanding of the problems associated with the economic production of atomic power.

When electricity was discovered no person foresaw its potential uses or the myriad devices that were developed and which found a place in our economy because of it.

And today no one knows what techniques or what instruments, for releasing and using the energy locked in the heart of the atom, will result decades from now. All we can do is seek, working toward our short range goals with our longer range goals in mind, and make a constant effort to turn up new information that may revolutionize our current thinking.

WATER RESOURCES FOR AGRICULTURE¹

WILLIAM E. WARNE

ASSISTANT SECRETARY OF THE INTERIOR FOR WATER AND POWER DEVELOPMENT

IN water resources for agriculture are to be found a chief hope of the world for enough food adequately to feed its expanding population in the years and decades ahead. Water is the one physical factor that dictates the character of agriculture over which man exercises more than nominal control.

The world has water enough to bring about a tremendous increase in food supplies through irrigation. Man has been using the world's water for at least 5,000 years to irrigate his food crops. But man has a long way still to go in applying irrigation techniques so as to make the best use of the world's land and water resources. The United States has made its principal contribution to those techniques in designing and building great dams and water control works. We can contribute much to the solution of the world's food-

shortage problem through sharing this "know how" with other countries.

The ploughman has followed the explorer into most of the world's habitable areas. In only a relatively few areas of the world, however, has the ploughman found natural conditions ideal for agriculture. But where the trouble was lack of adequate moisture, man has taken long corrective strides. Somewhat more than 200 million acres in the world are now irrigated. This acreage, comprising less than six-tenths of one per cent of the world's land area, provides food for probably 25 per cent of the world's people.

Much of man's early cultural development was associated with irrigation. The ancient civilizations of Egypt, Persia,

¹Adapted from address at the Second Academic Conference in Northwestern University's Centennial, March 1, 1951.

India, and China were founded in areas where natural precipitation had to be supplemented by irrigation.

The problem of providing adequate food, faced by the ancients, is with us today. World population continues to increase at a surprising rate. The pressing demand for higher living levels also multiplies the requirements for food.

By the end of this century, or soon thereafter, the world's population will reach three billion, according to Julian Huxley, former Director General of UNESCO, unless some unforeseeable force operates drastically to reduce present rates of increase. The dynamics of world food supply must be measured not alone in terms of numbers to be fed but also in terms of standards to be maintained. In terms of numbers, projected increases at current rates will require food for 22 million more people annually or 60 thousand per day. In terms of standards, the timetable for increasing food supplies must recognize the desirability of providing decent meals for all people.

The earth's land area from which much of the needed increase in food must come is, of course, not susceptible to expansion on any significant scale. A relatively small portion of the land surface on this planet is endowed with all of the essentials necessary for intensive farming. Of the world's 35.7 billion acres of land, 29.5 billion have suitable temperature, 22.7 favorable topography, 16.3 adequate soils, and 12.2 sufficient and reliable rainfall.

Consider the interrelationships of these factors. About one-third has suitable rainfall and temperatures. About one-fifth has suitable climate and topography. But only one-fourteenth, about 2.6 billion acres, has that fortunate combination of climate, topography, and soils needed to sustain what we colloquially call a "farm."

Each of these physical factors exercises a "veto" power over all others. As I have indicated, the only one we can do much

about is the limitation imposed by lack of moisture.

Experience in the United States has taught us to think of irrigation largely in terms of our own western development. In the West, irrigation projects, publicly and privately financed, provide water for farming about 21 million acres of arid and semiarid land. The history of irrigation in the Valley of the Nile, in Mesopotamia, and around the Mediterranean Sea, like our western experience, tends to encourage the popular view that irrigation is associated only with aridity.

IRRIGABLE LANDS

The irrigation of lands cultivated in humid and subhumid areas of the world promises an enormous food source. A billion acres of farm land in these areas could produce larger crops if water were made available to supplement the rainfall, which is not always dependable. This great acreage now yields less than it should because of moisture deficiencies. In some cases, the trouble is faulty distribution of the moisture, with adequate rainfall in early summer and drouth in late summer, so that only crops which mature early, like cereals, can be grown. In other situations, the rainfall may be adequate in but two years out of five, or in other erratic patterns. Irrigation, appropriately arranged, would make possible the production of more food in such instances.

The irrigation of crop land in humid areas already is beginning. I have had described to me with increasing frequency how some farmer in Iowa or in New York has made irrigation pay. Some of the most expensive irrigation works of which I have information are installed in Panama, in areas where the average annual precipitation is more than 90 inches. Bananas are produced there with supplemental irrigation.

Many of the world's so-called "one crop" economies have developed because of the characteristics of the prevailing

rainfall. Small amounts of irrigation water used during periods of seasonal deficiency would expand the selection of crops, and widen the horizons of agriculture. Both the quantity and quality of crops would be improved. Two crops a year can be produced with irrigation in some areas. Irrigated lands in several parts of Asia produce two crops a year now, and in some of the warmer areas of our own southwest, certain lands are double-cropped. When associated with other cultural practices to protect the land, irrigation can make a contribution in some limited areas by making it possible fully to use the exceedingly long growing season.

The principal areas where irrigation should supplement seasonal rainfall deficiencies are in central South America and in eastern Asia and India. Other large areas in this category are in central and southern Africa, Mexico, and adjacent lands of Central America and Asia Minor. There are such lands in the United States as well.

The deserts and near-deserts of the world, where precipitation is too light to permit intensive cropping under natural conditions, contain an estimated 200 million acres which might be irrigated. Development of this acreage, of course, can add another large volume of food to the world's supply. The importance of providing water where precipitation is wholly inadequate is immediately appreciated. Many of these desert or near-desert areas are now partially irrigated. A much greater acreage can be reclaimed in the enormous area which extends in a broad belt across northern Africa through Asia Minor and on into the heart of China and Siberia. Other such areas are in Australia, in the arid west of North America, and in South America, where inadequate precipitation prevents or greatly restricts formal agricultural operations.

POSSIBLE PROBLEMS

To be sure, the irrigation of a billion acres now farmed and the development of

200 million desert acres lie beyond today's economic horizons. Political difficulties likewise stand in the way. Few great river basins are encompassed by a single sovereignty. The complexities of problems related to interbasin water diversions will be multiplied in the international realm. We have found them difficult, though not unsolvable, at the level of interstate diversions in our own country. Such expansion of irrigation as I have suggested would require the solution of engineering problems of a magnitude as yet beyond the dreams even of this age of great works. Involved would be many long distance, interregional transfers of water from river basins having a surplus to those where stream flow is deficient. Physically such expansion probably can be achieved.

Supplemental irrigation of a billion acres now cultivated and full irrigation of 200 million arid acres not now farmed could be expected to double the world's food production. Let me emphasize, however, that both of these totals are estimated in advance of anything like satisfactory world-wide studies.

It would take a great deal of water to irrigate such vast areas, but I believe the water is available, principally in rivers and lakes. The average discharge of the world's 80 major rivers is almost 12 billion acre-feet annually; these include only those which each discharge annually at least 10,000,000 acre-feet into the oceans.

There are areas of the world where water for irrigation could not be found in natural streams. Arid lands in Australia, for example, are separated by reaches of oceans from major rivers.

IRRIGATION IN THE UNITED STATES

American irrigation has been based increasingly on the policy of putting water aside in one year for use during a later year. Where Joseph stored the mature grain for the lean seven years in Egypt's history, we store water in reservoirs behind great dams to fatten the lean years themselves. The work of the Bureau of Recla-

mation since 1902 thus has provided full or supplemental water supplies for somewhat more than 5,500,000 irrigable acres. That total area was in part not previously watered and in part developed originally by others, but with water service that proved deficient.

The water supplies available in our rivers and lakes may some day be supplemented as technological advancement makes possible the reclamation of sea water for agricultural uses. The ancient art of rainmaking apparently is now being reborn as a science, and from this source some day may come the answer to many water problems. Only in fancy, however, could these possibilities be considered today as economic means of increasing the world's food supplies through irrigation.

Modern irrigation in the United States began just over a century ago when the Mormon settlers diverted City Creek to water their fields and gardens on the shores of the Great Salt Lake. Since then, through individual effort, corporate promotion, community and co-operative enterprises, and State and Federal development, approximately 21,000,000 acres, as I have noted, have been reclaimed from the sagebrush for crops through irrigation. From the first rude diversion to today's complex series of dams, the engineering works have grown to keep pace with maturing legal concepts and bolder planning.

Small, single-purpose irrigation projects gave way to the multiple-purpose project that included, with irrigation, hydro-electric power generation and other services. A proposal was made 45 years ago that planning for the use of water and related resources should be on river-basin scale. The authorization of the "308 reports" of the Corps of Engineers a quarter of a century ago began to lay the ground work. The creation of the Tennessee Valley Authority in 1933 brought forth the first example. The work of the water resources subcommittee of the National Resources Planning Board firmly fixed the idea of basin-wide planning as

the goal of the Federal Government agencies engaged in water development.

Today, comprehensive river basin development has been proposed or is going forward in the valleys of the Tennessee, Columbia, Colorado, and Missouri Rivers. Progress has been made on plans for such development in the Rio Grande Basin and the Central Valley of California. Inter-agency studies are in progress in connection with the Arkansas, Red, and White River Basins, and the river basins of New England and New York. The President's Water Resources Policy Commission has just published the second volume of its report, listing ten river basins for comprehensive development in America's future.

The orderly development of river basins, now in progress in the United States, provides a pattern into which many other of the world's rivers could be made to fit. The Food and Agriculture Organization, FAO, one of the specialized agencies of the United Nations, is giving increased attention to water resources for agriculture. The technical program of the United Nations itself is likewise exploring ways and means of helping under-developed countries to put their water resources to work. The Point Four Program of the President is laying heavy emphasis on the study of irrigation and related projects in under-developed areas. Engineers drawn from American industry and governmental agencies are now working under these programs in many parts of the world. Scores of technicians are being trained in the United States and in their own countries under American experts in the skill necessary to adapt American methods to their own irrigation problems.

The contribution to the relief of present food shortages in the world and to the meeting of future requirements of a larger world population through assistance in irrigation development is one of the most promising methods by which the United States can contribute to world stability and thus to world peace.

PUBLIC RELATION TECHNICS

In The Chicago Public Elementary Schools

EVELYN F. PETERSEN

GRAY SCHOOL

RECENTLY, a study was made to ascertain the public relations technics used in the Chicago Public Elementary Schools and to point out the technics that might be used more extensively in the future public relations program. Data were gathered by means of a questionnaire which was sent to 324 principals representing all of the public elementary schools of Chicago. Returns were received from 135 principals, or from 41.7 per cent.

The questionnaire was a check list containing one hundred public relations procedures grouped into seven main categories. The public relations devices that made up the questionnaire were garnered from the works of leaders in the field of school public relations, such as Herold C. Hunt, Belmont Farley, Benjamin Fine, Gunnar Horn, Arthur B. Moehlman, Edward G. Olson, Ward G. Reeder, and William A. Yeager. Several publications were of special value in suggesting public relations technics that have been proved effective in practice.¹

The general administrative policies and objectives in public relations in the Chicago Public Schools were outlined by Dr. Herold C. Hunt, General Superintendent of the Chicago Public Schools, and Dr. James F. Redmond, Assistant to the General Superintendent of the Chicago Public Schools, in interviews with the writer.

Data compiled from answers to the 135 completed questionnaires reveal that pupils of the 135 Chicago Public Elementary Schools included in this research take an active part in the school public relations program through participation in planning and operating their school program in order to understand and appreci-

ate a happy learning experience. Pupils participate in this phase of the public relations program by co-operating in the upkeep of the school plant through work in clean-up squads, learning the plan of the building, serving on room committees, and learning about school services through curricular activities designed to teach about the public school system. Another way in which pupils may participate in the public relations program is through activities in clubs during school hours. However, every pupil belongs to a school club of his choice in only 8.9 per cent of the 135 schools studied. Eight additional schools have established clubs for limited grade levels. Only 14 per cent of the 135 schools have some type of club organization. Other effective avenues of interpretation that are natural outgrowths of the school club organization are lost where clubs are lacking. Specifically, pupils maintain outside relationships through clubs by securing knowledge from community leaders in only 8.1 per cent of the schools, and "school booster clubs" are found in only 12.6 per cent of them. Wider use could be made of school clubs as a technic.

PARENTS AS PARTICIPANTS

Another phase of the public relations program considers parents as participants in determining and operating the school program. In 92.6 per cent, or 125 of the 135 schools studied, there are P. T. A.'s or Mothers' Clubs. The various methods, checked by these schools, for stimulating

¹*Public Relations for America's Schools*, the Twenty-eighth Yearbook of the American Association of School Administrators; *The Public and the Elementary School*, the Twenty-eighth Yearbook of the Department of Elementary Principals of the National Education Association; *Today's Techniques*, the First Yearbook of the National School Public Relations Association.

attendance at meetings give evidence of advance planning by these organizations. Data show that the P. T. A. organizations attempt to present varied and interesting programs at meetings: 85.6 per cent of the 125 schools exhibit children's work at meetings; all of the 125 schools having P. T. A. organizations use outside speakers; 89.6 per cent offer demonstrations by the children; 59.1 per cent present panel discussions with parents and teachers participating; and 61.6 per cent use students as speakers. However, the use of a question box at P. T. A. meetings as a device for answering inquiries about the school program was encountered in only 14.4 per cent of these schools. More schools could employ this recommended technic.

The schools can offer further opportunities to parents to participate by organizing parent-teacher committees to suggest improvements in school procedure, inviting trained specialists from among the parents to help in arranging exhibits, or some similar means. Through organized sessions, such as the P. T. A. meetings, the desired two-way flow of ideas between the public and the school is made possible. Moreover, educational developments and needs become apparent to all concerned.

Only 15.6 per cent of the 135 schools considered here have a public relations committee to plan the school's publicity program. It is evident from these data that with the trend toward providing opportunities for teachers to share in determining school policy many schools are in need of public relations committees to plan their publicity programs so that the public will be supplied with a continuous flow of interesting and varied information about the schools.

The data show that there is also a need in most of the 135 schools studied for a conscious periodic and continual evaluation of the public relations program in each school. Only 18.5 per cent of these schools appraise their public relations programs. Devices and technics that have been found effective in practice become

the basis for future public relations procedures. Therefore, planning the long range public relations program and noting progress of the local school program are dependent upon evaluation of the existing program.

UTILIZING THE NEWSPAPER

The majority of the schools studied can improve methods employed in using the newspaper in their public relations effort. Inviting reporters to the school, a method for building good press relations, is used by only 31.1 per cent of the schools. However, another method for building good press relations, sending routine news to editors, is used in 58.5 per cent of these schools. Careful selection of school news prevents misinterpretation of the schools' endeavors. The publicity calendar, the news notebook, a school news scrapbook, and stories built around effective pictures of a small group of children "doing something" are devices that aid in the proper selection of school news. Data show, however, that less than one-third of the schools studied employ these procedures in connection with the newspaper.

The public elementary schools studied are employing many recommended methods for promoting parent-teacher cooperation, but some methods used to achieve this important public relations objective need more emphasis. It is commendable that in 91.1 per cent of the schools studied the health needs of the children are made known to parents. It is also commendable that 86.9 per cent of these schools send circular letters to parents. Nevertheless, the many possibilities of the circular letter as an avenue of expression in the public relations program are not fully utilized because the topics included are not varied enough. Statistics from this study show that the circular letter is used chiefly as an invitation to some school affair; whereas, only 17 per cent of the 135 schools include the gist of a state or city report, 21.5 per cent include the functions of special rooms, 30.4 per cent include an explanation of new trends

in method and curriculum, and 38.5 per cent list major objectives for the school year. Although the latter information is of a routine nature it is very essential to the creating of mutual parent-teacher understanding.

Data show that about one-third of the schools studied make the grade report more meaningful to parents through additional information, such as the reading level or comparison of effort with ability. The latter practice should probably be incorporated in the marking system of the other 135 schools studied in order that parents and teachers may work together effectively.

It is rather difficult to teach a group of children and hold a parental conference simultaneously. Nevertheless, only 27.4 per cent of the 135 schools provide help for teachers and child care for mothers to assure uninterrupted parental conferences.

COMMUNITY AN EDUCATIONAL LABORATORY

The schools included in this research are utilizing the community as an educational laboratory in these approved ways: 85.2 per cent make field trips into the community; 51.1 per cent obtain community materials for classwork; and 55.5 per cent invite key community persons to address school assemblies. Further utilization of the community could be accomplished through the following means: the sociological survey by the principal, a survey of community groups to learn their aims in order to work with them, school surveys of community educational materials, community surveys by the children, a community calendar of events kept by a faculty-student committee, and pupil speakers sent to neighborhood group meetings.

The vitalized commencement program is an important avenue of interpretation and certain procedures characterize it. Every graduate participates in it. Eighty per cent of the 135 schools studied follow this procedure. The vitalized commencement frequently uses members of the

graduating class as speakers. Forty-three per cent of these schools use graduates in this capacity. The vitalized commencement program provides an opportunity to exhibit the school's work through the distribution of printed programs made in the art classes or in the high school print shop. Data show that about one-half of the 135 schools distribute printed programs made in the art class or the high school print shop. The vitalized commencement program utilizes one page of the printed program for school publicity, such as objectives for the school year, philosophy, or tentative plans for some school project. Only 4.4 per cent of the schools studied use this last technic. Thus, these data reflect that the schools studied need to adopt more of the procedures that characterize the vitalized commencement program.

The majority of the schools studied indicated the use of diversified methods for displaying and exhibiting the results of learning activities to their public.

This study found the significant characteristics of the general administrative policies and objectives in public relations in the Chicago Public Schools to be these:

1. Concerted effort to democratize administration.
2. Co-operation between school and community in educational planning.
3. Good co-ordination of the over-all public relations program.
4. Flexibility in the general policy on public relations to allow each school to use public relations technics best suited to its particular problems of interpretation.
5. Utilization of the best recommended devices, technics, and procedures in the over-all public relations program.

Some significant needs of the public relations programs in the schools studied in view of the public relations technics used may be stated briefly. It is important, for example, that each school include all of the main types of public relations media in its program in order to reach its many publics. It must be realized that

the system-wide public relations activities and the public relations activities in each school overlap in their mutual efforts to interpret the schools to the public.

SUMMARY OF FINDINGS

The main types of public relations technics that are used extensively in the 135 schools studied may be summarized as follows:

1. Pupils participate in planning and operating the school program.
2. Parents participate in determining and operating the school program.
3. Methods are used to promote parent-teacher co-operation.
4. Diversified general activities are used to interpret the school to the public.

In order to balance the public relations program within each school this research found that the majority of the 135 schools studied need to add these main types of public relations media to their programs:

1. Teacher participation in improving the school program.
2. The employment of recommended practices in using the newspaper.
3. Utilization of the community as an educational laboratory.

The schools studied are to be commended on their wide use of the following technics:

1. Pupils co-operate in the upkeep of the school plant through work in clean-up squads.
2. Pupils serve on room committees — health inspection, courtesy.
3. Parents and teachers belong to the P. T. A.
4. Circular letters are sent home to parents.
5. Health needs of children are made known to parents.
6. Field trips are made into the community.
7. Schools hold Open House.
8. Every graduate participates in the graduation program.
9. American Education Week is observed.

Presently, the schools studied need to extend their use of the following public relations technics:

1. School clubs.
2. Question box — for questions about the school to be answered at P. T. A. meetings.

3. Public relations committee — to plan the publicity program.
4. Periodic and continual evaluation of the public relations program in each school.
5. Invitations to reporters to school.
6. Publicity calendar to be kept by the principal or public relations committee in each school so that seasonal news will not be overlooked.
7. School news notebook — to record brief written notes of day by day news items as they occur.
8. A school news scrapbook — made of clippings about the school and about the school system.
9. Stories for the newspaper — built around effective pictures of small groups of children "doing something."
10. Teaching of newspaper appreciation.
11. Circular letter to parents — vary the topics.
12. Parental conferences — make adequate provisions for uninterrupted interviews.
13. Grade report — make it more meaningful to the parent through additional information about the child.
14. Sociological surveys by the principal.
15. Community surveys by the pupils.
16. Survey of children's activities in the community.
17. Survey of community organizations.
18. Recordings of the child's voice made during some class situation and reproduced for parents.
19. Learning activities photographed by pupils on a "camera tour."
20. Slides made showing learning activities.
21. Movies taken of learning activities.
22. Old fashioned spelling bees and ciphering contests between children and parents.
23. Oratory contests.
24. Vitalized commencements.

All of the one hundred public relations technics suggested in the questionnaire of this research are used in some of these schools. The lowest number of the one hundred technics used in any of these schools is 7; the highest number of suggested technics used is 79. These figures show that all of the 135 schools studied are at least conscious of the individual role each school must play in the over-all public relations program. However, within the main types of media most of the 135

schools need to vary their form of interpretive technics in order to keep the interest of their many publics.

It can be said, in conclusion, that the 135 Chicago Public Elementary Schools studied give evidence of a substantial degree of awareness of the need for effective community-school relations. The data also indicate that there is considerable activity

in these schools to establish and maintain a satisfactory public relations program. As has been indicated previously, however, there are some areas that have been either unexplored or only slightly explored by these schools in their public relations efforts. It is these areas that seem to indicate the direction of the future development of the public relations activities of these schools.

THE SOCIAL STUDIES TEACHER AS THERAPIST¹

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LET me reassure you at the outset. I shall not use the words ego, id, or super-ego. I know only how to spell them and not what they mean. My concern is with some of the problems you face every day, not with an esoteric language.

My concern may be stated in a good many ways, but from them I choose to say that it is the relation of emotion to reason. Since the days of Hume our thinking about their relation has undergone a revolution. Before Hume the view was that action was dominated by ideas and reason. But Hume turned the cat around and said that reason was and should be the "slave of the passions," or in more temperate language the emotions and desires. This view was fortified by William James when he told us that "consciousness is in its very nature impulsive." And so, on the ground of the views of Hume, James, Dewey, Meade, Thurstone, and everybody else who understands the dynamic self, modern psychology and psychiatry have taken the stand that intellectual disturbances originate in emotional maladjustments.

In the choice of a word by which I might indicate what the social studies are con-

cerned with, I choose the word character. But in choosing the word "character" I shall not be concerned with the traditional religious version of it. I shall rather be concerned with its formation and reformation as the supreme end of social education, indeed all education. What I shall mean by it is what William James meant when he wrote that "your task is to build up a character in your pupils; and a character consists in an organized set of habits of reaction."

One of the characteristics of the good life is that its members carry on their human relations with a minimum of destructiveness or hostility. But we can not understand the ways of democracy, after which our conception of the good life is fashioned, without reducing human relations to elements of power. And we can not understand power without reducing it to impulses, drives, tensions, and the like.

This suggests that our problem, like a B & G sandwich, is a three-decker. We may ask,

1. How is it possible to achieve peace, order, and good government inside the individual?

¹Adapted from a speech given at the Annual Regional Conference sponsored by the Chicago Council for the Social Studies, March 3, 1951.

How, out of the unordered, disorganized, conflicting impulses of the adolescent can an ordered, organized, and harmonious character be achieved?

2. How is it possible to achieve peace, order, and good government in a society? How, out of the unordered, disorganized, conflicting interests of individuals can an ordered, organized, and harmonious society be achieved?
3. How is it possible to achieve peace, order, and good government in the larger society: the world if we think of nations, or of a nation if we think of parties and power groups?

We are faced with the fact that nation is set against nation, group is set against group, man is set against man, and man is set against himself. My three-decker has become a four-decker and from that fact I draw the moral that it is not the number of "decks" which is important. It is, to change the figure and mix my metaphors, how you get from one to the other which is important. But we can not deal with all of them at once, which throws both sandwich and ship out the window. But we can, or at least I shall try to, deal with the problem of inner personal conflicts and, thereby, find myself dealing at least by implication with inter-personal conflicts which, if followed through, would inevitably involve us with the inter-relation of nations. But now my focus of interest is the student and his world: his dilemmas, bewilderments, fears, anxieties, hostilities, and frustrations. The field, of which this focus is the center, is in its largest dimensions the wide world.

And now permit me to attempt the role, if not the manner, of the psychiatrist — but a very amateur one for the mental hygiene angle to social education is the common-sense child of the science, or rather the art of psychiatry. I define psychiatry not as the study and cure of something called "the absolute individual," but the study and treatment of inter-personal relations. But I mean inter-personal relations, as indeed the

psychiatrist does, which far transcend the relation of analyst to patient. I mean inter-personal relations which include all the groups to which the student belongs and which, because of their different, disparate, and conflicting moral standards, bewilder him in his attempt to internalize them and live by them. And, by the same token, mental hygiene includes a concern with the student, not only in terms of student-teacher relations important as they are, but in terms of his relations with every group which affects his emotions. The only way the teacher of the social studies can escape the implications of this view is to confuse the textbook with the student's personal and inter-personal life, which is the real object of social study.

And now let me try to say, in a word, what I understand therapy to consist of. Whether practiced by the psychiatrist or the teacher of the social studies it is the provision of that atmosphere in which the student may find himself free to behave according to his normal drives and impulses and thereby maintain and improve his character. This definition and view is premised on the assumption that the student is eligible for human dignity even if he has not yet achieved it, and that he will achieve only if he has the chance, under the wisest teacher, to practice it. Education for democracy must be education by democratic means among which the student is not one. He is its end.

I must pass quickly over the long and complex story of why that kind of atmosphere is necessary. A recent study in an Ohio industrial-rural county showed that one in every five elementary school children presented evidence of poor mental health of some degree of seriousness, and that large numbers were maladjusted to a degree so serious as to be in grave need of specialized guidance. (They tell us that almost any county in Ohio is likely to be representative of communities of similar composition anywhere in the United States.) Caroline Ware has told us

that whenever the articulate and inquiring young people on New York's East Side expressed themselves, it was to stress the confusion rather than the order in their lives. Every social studies teacher who is perceptive and socially informed and aware knows that the making of profound and far-reaching judgments falls on the individual today as never before and hence that the student's personal security can not, as in an earlier day, be found so easily in the traditions and customs of his group life. He must make much of it himself. Every such teacher also knows how intelligence, in a distorted and unhappy student, can be used for aggressive and destructive purposes and for defeat and escape.

If the child is father to the man, and he is, we now inquire how the perspective and method called mental hygiene can aid us in helping a confused, hostile, and bewildered youth, most of whom are something less than articulate, however inquiring they may be.

The process and also the problem of "growing up" is not primarily a matter of time. It is primarily a matter of experience. It is a matter of the experience of emancipation from childishness and its inadequacies, for the intelligent meeting and mastery of first adolescent, then adult rights and obligations. But there is nothing unique in this for "the history of human intelligence is a record, not so much of the progressive discovery of truth as of gradual emancipation from error." Mental hygiene views that emancipation as requiring the removal of emotional disturbances to clear and realistic thinking about one's self and his relation to others: fears, anxieties, frustrations, delusions, false perceptions, and all that interferes with the formation of character fit for democratic living. Its task is not to make the student unfeeling, for that would be worse than to make him unthinking. Its task is rather to bring youth to want to do the right by learning which impulses are the good ones and how to

direct his attack on the environment by using them, rather than the bad ones. For, as Whitehead has told us, the "primary function of reason is to promote the art of life."

In order to create the atmosphere of which I speak, I suggest quite modest and non-technical means. Rorschach and thematic apperception tests are not among them. I am not against their use; indeed, I am in favor of it. The methods I now envisage are those which the teacher may use "with her bare hands" or, in the idiom of youth, almost after the manner of "Look ma, no hands!" But not, ma, without her head and her heart.

THE ROLE OF THE TEACHER

The first and indispensable means which the mental hygiene approach to youth's education requires is the ability of the teacher to play the role of "the other one." This requires that she be able to enter into the imagery of the student and see life as the student sees it—with all its distortions, dilemmas, confusions, and paradoxes. For these dwell, not in the world "out there," but in the world "in here"—in the student's imagination. This is the first and the continuous step in diagnosis.

But the task has a mass quality about it because I assume that the teacher is not a technical expert and that her approach to it is not on the axis of teacher-to-one-student. It is on the axis of teacher-to-the-whole-class. This demands that she play the role, not only of "the other one" but the generalized "other one." This is made up of youth from across the tracks and youth from "Elm Street"; those whose fathers support the family by the use of their hands and those who support it by the use of their heads; the children of those who borrow and the children of those who lend; those who come from life circumstances with little or no margins of spiritual and material security and those whose parents, whether by chance, inheritance, chicanery, or devices decent, have

an abundance of spiritual and material surpluses.

Despite these differences our students do constitute the "generalized other" of which I speak. They are all traveling the uncharted road of adolescence. They are all trying to emancipate themselves from a past which no longer satisfies, and make a present and future secure and happy. They are all seeking the meaning of life as they find it. They are all architects of character.

And now we need to state their problems in terms about which the social studies can do something, for it is as teacher of the social studies and not as psychiatrist that the task confronts us. That task, in a word, is to help youth come into possession of a body of meaning which is closer to reality than that which they possess. This is the task of mental hygiene.

This requires, first, that they have reliable knowledge about the things which they now know by dreaming, by phantasy, and by folk wisdom. They need reliable knowledge and we believe that it is the business of the social studies to provide it. But it can be had only by the use of the most reliable set of means which man has devised. These are the methods of social inquiry which derive from the scientific method. Only by their use can our students engage in realistic thinking. Any other than reliable knowledge or reliable means of getting it are not only unreliable but dangerous. But they too may be dangerous because they may put the student "on the spot." But, in America, being put "on the spot" is hardly a new experience. However, if reliable knowledge and the means of getting it come gradually, rather than with shock and surprise, and if they come in association with an inspired and wise teacher who can lead the search for truth in a calm and even casual way, no such effect need ensue.

Therefore, we reject the shock technique. It will be shock enough to most students

to find out that they are understood. We subscribe to the creation of the right atmosphere by the gradual method of which we have just spoken. Shock may drive the student away, and his anxieties and confusions to even greater depths. Neither will we tell the student "to be good," lest it result, as it well may, in his believing that we think he is bad. Nor will we give him the old Pollyanna punch-line that "everything's going to be all right," for fear that he may believe we know it isn't or we wouldn't have said it was. Nor, finally, will we undertake to hand out pat and pious advice which may well enough result in the student's thinking, "OK, she told me to go ahead; it's her responsibility now."

SUBJECT MATTER SUGGESTIONS

But now, more positively and in terms of subject-matter, what do I suggest? The following will illustrate.

The study of adolescent maturity among some primitive people may throw light on such concerns as sex problems and parent relations. The study of gang conflicts, even zoot-suit riots or their equivalent, may illuminate some aspects of youth's attempt to find a place for itself or to escape its place, depending on the point of view and circumstances. The study of the family as a pattern of super- and subordinate roles and as a universal instance of the mutual relation of freedom and restraint may help to give meaning¹ to the conflict of parent-youth generations and what is involved in achieving the independence which adolescents seek. The study of the structure and operation of the labor market may relieve anxieties about how one gets a job and gets ahead. And the study of war and nationalism may make its contribution to some insight into why wars come and what they accomplish for human relations. Throughout I have said "may," for I can give no assurances. We face the simple alternative of talking about the world in which the students now live and try to make their

way, or a world that never was, with which the present curriculum in too many schools is chiefly concerned.

But success is not easy to come by, on two counts. The first is the risk of shock. The second is the fact that the character which the student already has is a stubborn thing which resists change. In any event the student will, under the mental hygiene conception of teaching, go through a cycle something like the following:

He will first resist the teacher's attempt to change old habits and disturb old points of view.

This resistance will put him "in the middle." He is now between two worlds, his old one and the one which the teacher presents. He thought he was sure. Now he wonders if what he was sure about makes sense. This puts him in a state of disturbing ambivalence. Likewise his former self-conceptions are challenged. His ego is threatened.

Here the road forks. He may assert his old self. The word for this is projection. This is a return to his comfortable, though paradoxically enough, bewildering past. Or, he may, if he has what Nathaniel Cantor calls "the will to conquer," effect his identification with the new point of view.

In fact and in deed, there is no royal road to learning. Which means that if the new facts do not improve the student's understanding of himself, his behavior, and his relationship to others and his place among them, they have fallen on stony ground. It is the function of truth to become flesh and dwell among us.

CONDITIONING THE ATMOSPHERE

But I have said little, if anything, about the atmosphere in which this must go on. It is a kind of intellectual and moral climate which, like all climates, owes its nature to certain conditioning factors.

It requires, as I have implied, that we need to look at the student's behavior from his point of view. What he is doing can be explained and understood, and changed, only in terms of his attempts to maintain himself. This is basic. What

order the other conditioning factors come in, if indeed they have a fixed order, I do not know. I shall comment on them as they have occurred to me.

The teacher will act under the "lightning rod principle" rather than the "elimination principle." By this I mean that she will protect herself and the student against the lightning of the student's aggressive and hostile behavior, not by outlawing or eliminating it but by drawing it into channels where it can do little damage, or at least less than usual. This is the principle which is followed in the kindergarten where beginners learn without knowing it. The use of the "lightning rod principle" will require, at least, that if the teacher asks the student to express himself he will feel free to do so without fear of reprisal by the teacher's display of a hostile and threatening attitude in case he doesn't do very well. Otherwise the mounting spiral of "you dast; you dasn't" which went on between Tom Sawyer and Huck Finn will create a scene. Nor will the teacher do all the talking, or half of it, or a third of it. But I confess I do not know the safe and sacred fraction; I give only a general warning. A good many teachers might better have entered the ministry; they so love to be their students' vicar and, in that role, permit them chiefly or only vicarious experience. In defense of it one hears the remark that "the kids made so many mistakes." To which the answer is that there is no better place in the world to make them than in the right classroom with the right teacher. The student had better learn the consequences of his acts, good or bad and right or wrong, than to learn "the punishing teacher."

Rote-learning and lesson-saying are, of course, obsolete. To learn in the sense only of remembering in order to "give it back to the teacher in a test, come Friday" is, in the idiom of the market, not a game of profit and loss. It is all loss. Remembered facts get the student nowhere—except to forgetting them. We might revise Wordsworth and put it, "getting and

forgetting, we lay waste our powers!" Nor do they convey any meaning except the meaning of the hostility and boredom which they engender. This is not to decry facts. It is only to insist that they be facts about something which makes a difference in the attitudes and beliefs of the students. Only if the student learns to meet such problems as "how" and "why" and "which would you choose" in the classroom, will the time spent there bear helpfully on his resolving similar problems after 3:30. In the conventional recitation the student is asked to recite on material which everyone else has been required to read. In such a situation he can lose his self-respect by failing, but he can hardly gain it by succeeding. Even if his recitation is perfect he can hardly feel that he has been of any value to anyone else in the class because all who might value his information already possess it. But this probably holds true chiefly for the brighter students, for I have marveled to see something akin to enthusiasm in a class which was a forty-minute spate of competition among the kids to see who could come up with the most inane, inert, and sterile facts.

Along with these is the teacher who is capable of loving her students without being sentimental and who knows that being affectionate does not rule out being firm. The teacher who stands by the students, not over them. The teacher who is, first of all, a first rate human being and hence who teaches quite as much by personal example as by precept. The teacher who creates, as naturally as she breathes, the warmth which invites not only to "belonging" but also to learning.

These are some of the factors which condition the atmosphere or climate in which the student will be truly free. But I find a certain danger in it which appears

in excessive emphasis being put on "belonging" and "social adjustment" as ends in themselves. I do not want the atmosphere to be mandatory. I want it to be permissive. But I want it to be legitimately free rather than anarchistic, for anarchy is intolerable even to those who say they want it, once they have had a taste of it. And by "legitimately free" I mean that it is not without controls but, insofar as possible, those which the students impose upon themselves. Hence it is not an atmosphere which allows capitulation to student whims, as the extreme progressives would have us do. I want a precision in it, not for its own sake, but for the sake of something which is worth knowing. And I do not want it to produce people who are all alike, but only decently different. The unity of character which we seek is not a birthright but a discipline.

I have sought to present the teacher of the social studies, not the professional counselor, as therapist. This does not disbar the counselor from using the methods of mental hygiene, for indeed there are no others. And, despite a legitimate division of labor between teacher and counselor, I am wary of the over-bureaucratization of counseling. The social studies teacher who is not also wise counselor is not my kind of social studies teacher. The roles are inseparable, for the teacher who employs social knowledge employs it in vain if it does not touch and change the desires and emotions of the student. If social knowledge can not or does not do these things then the outlook for the formation of stable character through the social studies is depressing indeed.

Finally, it is my sustaining faith that it may not be said of us, as it was of King Lear, that he "hath ever but slenderly known himself."

I am a part of all that I have met. — Tennyson

THE BROOKINGS INSTITUTION

BENJAMIN COLBY

THE Brookings Institution is devoted to research in economics and government, but an integral part of its effort is the presentation of the results of this research so that they are educational in the broadest sense. Its publications have a wide circulation among general readers and at the same time are used as texts in college and university classrooms throughout the country. The fact that more than 300 books and pamphlets have been published by the Institution and its predecessors may give an idea of the size of the research program of which they are the end-product.

The Institution as at present constituted was founded in 1928, but its origins go back to 1916 and 1922, the respective dates of the founding of an institute for government research and an institute of economics which were amalgamated to form the larger unit. The Institute for Government Research was set up by a group of educational and business leaders from many states to meet the growing need for scientific and objective study of the expanding structure of the government. Recognition that the increasing complexity of economic and social problems necessitated a much wider public knowledge of the working of economic forces was responsible for the establishment of the Institute of Economics. This organization was initially financed by a ten-year grant from the Carnegie Corporation of New York, as the result of the efforts of a group of eighteen university presidents, business executives, and economists. The objectives of the Institute were set forth in a memorandum from the founders to the Carnegie Corporation as follows:

In order that such an institute may fulfill its purpose, it must be clear that its sole object is to collect facts, to marshal them in intelligible form, and to interpret them in the service of

the truth only and not in the service of any party or section or group in the body politic. To make this truth clear to the mass of our citizens.....would be to do a service whose value would be beyond all estimation.

Another conception underlying the establishment of the Brookings Institution was the need for a type of research training more realistic and practical than that provided by existing institutions, one more closely related to the requirements of the public service. Thus the Institution for many years—until World War II—granted fellowships for advanced graduate students who found it advantageous to pursue their studies in Washington. In recent years, the educational emphasis has been entirely on making the results of research widely available in clear and understandable form and in special efforts to prepare material for use in colleges and universities, study groups, and organizations of various kinds.

The Institution is absolutely independent. It is governed by a self-perpetuating Board of Trustees who elect the President, approve the fields of investigation and the major specific studies, and review periodically the administration and the program of the Institution. The Board does not pass upon or assume responsibility for individual projects, that being left to the President, assisted by the vice-president and an advisory council of staff members.

STUDIES SIGNIFICANT AND TIMELY

Proposals for investigations arise in a variety of ways. They are suggested by staff members, members of the Board of Trustees, foundations, government agencies, members of Congress, business and other associations, and individuals interested in the solution of current economics and social problems. Decisions as to the research program for any given period must take account of the significance and

timeliness of the projects suggested, of the availability of factual information and competent personnel, and the adequacy of financial resources.

The Institution has sought in its studies the double objective of clarifying current economic and governmental problems and contributing to the revitalizing of economic and political thought. Thus its policy has been to project series of investigations, where possible, in which each unit deals with problems of current interests, while the whole constitutes an integrated project of general significance.

Studies of the Institution have been notably timely. This result has been achieved by discerning trends and by concentrating the research effort in such a way as to keep fully abreast of emerging issues. A notable example was the series of investigations in the early twenties of the capacity of various countries to pay reparations and interallied debts. This was concluded in time to make the findings directly available to those charged with responsibility for adjusting the difficulties which eventually arose. Later developments substantiated the soundness of the conclusion that the war debts were a serious barrier to world prosperity.

Likewise, in the thirties the pioneering investigations of the distribution of income in relation to economic progress were completed in time to exert a direct influence upon public opinion and public policy. These studies redirected thinking with respect to fundamental economic issues.

As government action and control in the economic sphere has widened, special attention has been given to problems arising from, or affected by, this development. Emphasis has also been placed on the fundamental causes of the great economic growth of the nation, as related to the nation's resources and possibilities for future rise in living standards.

The Institution has continuously adjusted its work in government to meet the needs of changing conditions. Thus, in

the early years it was focused largely on the federal government, which at that time had no budget and a very deficient system of financial administration. In subsequent years, attention was largely shifted to state governments, and in the period of great federal government expansion emphasis again was placed on the national field.

Situated in the nation's capital, the Institution has been well placed to render services both to the federal administration and to the Congress. Over the years it has been repeatedly called upon for counsel and special studies of various kinds, and such services were especially notable during the war years.

The work has always reached a wide reading public due to the timely significance of the investigations and aided by a continuing effort to present the analysis in as simple and non-technical form as is possible. The books and pamphlets constituting the research reports are sold through the customary retail channels as well as direct by mail, and digests of the more extensive studies are sometimes issued in pamphlet form.

The results of the studies are also carried in news and special articles by the news associations and special correspondents in the capital, and are used in trade journals, general magazines, and by radio commentators. Members of Congress receive the publications only upon request, but several hundred copies of each publication are distributed in this way. Translations have been made into many languages, including Japanese and Arabic.

INTERNATIONAL STUDIES ADDED

Growing awareness of the need for an informed and responsible public opinion on foreign policy led the Institution in 1947 to initiate a broad program of international studies which has formed a substantial part of its work since then. The foreign policies of the United States are the primary focus of the analysis and interpretation under the program, while the general approach and emphasis are

principally in terms of the current major problems of international relations that pertain to those foreign policies. The research activities under the program are intended to enlarge the body of data and to improve the analytical material essential to the development of an understanding by the American people of the nation's foreign policy.

An important part of the work is directed specifically toward university classrooms. Each year the Institution publishes a volume, *Major Problems in United States Foreign Policy* which sets forth in detail developments in various parts of the world which give rise to problems for the United States policy makers. The material is presented in a manner closely approximating that used by government officials in the formulation of policy, and makes it possible for the students to employ government technique in approaching these problems. The material in the annual volume is brought up to date by monthly supplements on foreign policy. The student is thus enabled to place himself in the role of policy maker with necessary factual material already at hand. Today, more than 110 universities and colleges are using these volumes as texts.

Many instructors in foreign affairs have not had the opportunity to serve with the government and thus familiarize themselves with the government policy-making process. To contribute to an understanding of this process, and to improve methods of instruction in foreign affairs generally, the Institution conducts an annual seminar on major problems of United States foreign policy, the conference being held each year at a college or university in a different section of the country. The participants include teachers, government

officials, officers of the armed services, and others representative of all the specialized fields of foreign policy.

SIMPLIFIED PRESENTATION UNDERTAKEN

The more complex our civilization becomes, the greater is the need for public understanding of the economic forces which affect our lives and control the national destiny. How to convey economic facts and principles to the rank and file of the people has always been a great problem. At best, economics is not a simple subject, and one of the difficulties has always been the use by economic writers of abstract terms and generally difficult verbiage.

To meet the need for easily understandable material in this field, particularly in foremen's classes in industry, the Institution has recently published *The Dynamic Economy*, by Harold G. Moulton, president. This book, based on studies made at the Institution, sets forth in a simple and realistic way the factors and forces which have been responsible for America's extraordinary economic development, presenting them in dialogue, in the form of a play. The characters in the dialogue are figures who have been closely identified with various phases of the nation's economic advance for the past hundred years, and they are impersonated by members of the class or study group. While the dialogue form is used to sharpen the analysis and enhance the interest of those participating in the discussion, the purpose of the so-called play is education and not entertainment. Already it is being used in classes at the foreman and supervisory level in several large industries, and the general reception accorded this material indicates the wide need for such simplified presentation.

Every man owes something to the advancement of his profession. — Theodore Roosevelt

UNITED STATES CUSTOMS IN CHICAGO

WILLIAM A. ROWAN

COMPTROLLER OF CUSTOMS IN CHICAGO

UNITED STATES CUSTOMS

UNITED STATES CUSTOMS SERVICE

ESTABLISHED 1789

★ ★ ★
PRINCIPAL FUNCTIONS: COLLECTION OF DUTIES AND TAXES ON IMPORTS; DOCUMENTATION OF VESSELS; ENFORCEMENT OF CONTROLS OVER THE IMPORTATION AND EXPORTATION OF CERTAIN CLASSES OF MERCHANDISE, AND OVER THE MOVEMENT OF VESSELS, VEHICLES, AND OTHER CONVEYANCES ACROSS OUR BORDERS
★ ★ ★

PORT OF CHICAGO

FIRST CUSTOMHOUSE OPENED IN CHICAGO APRIL 1, 1846

TRANSACTIONS IN THE CHICAGO CUSTOMS DISTRICT DURING THE FISCAL YEAR 1950

TOTAL COLLECTIONS	\$ 20,319,923
TOTAL NUMBER OF ENTRIES FILED	64,300
TOTAL NUMBER OF PACKAGES EXAMINED	218,293
TOTAL NUMBER OF PASSENGERS ARRIVING BY PLANE DIRECTLY FROM FOREIGN COUNTRIES	15,801

FOR more than a century Customs duties were the principal source of revenue for the Government of the United States. During the years from the surrender of General Cornwallis to the inauguration of President Washington, a chaotic condition had prevailed in the new republic with practically every state levying its own duties, not only against merchandise imported from abroad, but also against its neighboring states. It was not until the Constitutional Convention of 1787 that the foundation was laid for the Customs Service which became effective in 1789. In fact, the second law passed by the Congress of the United States and signed by President George Washington is entitled, "An Act for Laying a Duty on Goods, Wares and Merchandise Imported into the United States." The first law prescribed the Oath of Office to be taken by members of Congress, members of the cabinet, Federal officials, and Executive and Judicial officers of the several states. The third law, effective August 1, 1789,

provided for the machinery for the collection of tariff. It was not until the second decade of the present century that the Income Tax Law was enacted providing revenues immeasurably greater than those derived from the collection of Customs.

The Customs Service collects not only duty, but a few other items of revenue as well, the principal one being internal revenue. In the fiscal year 1949, the collections of internal revenue were actually greater than the collections of duty in five of the customs districts, including Chicago.

Today the Customs Service is divided into forty-five districts, which comprise not only the continental United States but several of the territories as well. Hawaii, Alaska, and Puerto Rico are customs districts, and the exchange of merchandise between the United States and those territories is on the same basis as the shipment of goods between two of the states. The

other territories are not customs districts — that is to say, merchandise received therefrom must be entered at the custom-house. However, merchandise which is produced in those territories or grown therein is free of duty upon the presentation of appropriate evidence as to its origin.

REVENUE COSTS VARY

The cost of collecting one dollar of customs revenue varies greatly. In Alaska it is \$1.30; in El Paso, Texas, which has a large land border to cover and many ports but which receives little revenue, it is \$1.25; in North Carolina, where the principal importation is tobacco on which the duty can be collected at relatively small cost, it is only \$.008; in Chicago it is about \$.035. In New York, which is the largest port and which does approximately one-half of the customs business, the expense is approximately twice what it is in Chicago. This is principally due to the fact that New York has a heavy passenger traffic, which requires extensive manpower but yields little revenue.

During the calendar year 1950 the total collections at the port of Chicago were \$31,254,244.21 — \$15,252,711.38 for Customs Duties and \$16,001,532.83 for all other collections.

The Bureau of Customs has complete figures on the total collections in all districts only up to the fiscal year 1949. In that year the total collections for all the customs districts were \$518,354,858 — \$391,584,087 for Customs Duties and \$126,770,771 for all other collections.

The great majority of citizens know comparatively little about the customs services; in fact many persons are in awe of the customs inspector and frequently manifest hostility toward him since he is compelled to scrutinize personal effects of American citizens returning from abroad, probably the only time they come into contact with the Customs Service.

The law now provides liberal exemptions from duty on articles acquired

abroad by residents of the United States under certain conditions.

Since many Chicagoans go abroad each year the following facts as to exemptions may be very interesting and informative:

1. Allowed to permanent residents of the United States, whether or not they are citizens of this country.
2. Apply to any article which is acquired by gift or purchase for the personal or household use of the returning resident, or as a bona fide gift for other people. Articles acquired with funds provided by other persons and gifts from persons abroad to someone in the United States other than the returning resident are, of course, not exempt.
3. Apply only to articles acquired as an incident to the trip; that is to say, if the returning resident makes a trip abroad for the specific purpose of acquiring the articles, the exemption cannot be allowed.
4. Allowable to all individuals, regardless of age. Persons who live in the same household, and who are related by blood or marriage, can group their exemptions and apply them to articles owned by any member of the group.
5. (a) The amount and frequency of allowance are \$200 if the absence is at least forty-eight hours. On the Mexican border, below Los Angeles, a twenty-four hour absence is required; at other ports on the Mexican border it is not necessary that the returning resident be absent any particular period of time in order to obtain the benefit of the \$200 allowance. This exemption can be claimed only once every thirty days.
(b) If the absence is at least twelve days an additional amount of \$300 is allowed. This exemption can be granted only once every six months.
(c) The additional \$300 exemption can not be used for liquor or cigars. Under the \$200 exemption, only one wine gallon of liquor and only 100 cigars can be included. However, on those quantities the internal revenue tax is waived as well as the duty.

The Coast Guard, which originally was a revenue collecting service of the Customs, is now an independent agency, although it does, in addition to other duties, carry on the maritime services for the

Bureau of Customs. Immigration matters, which were originally handled by the Customs Service, are now largely under the jurisdiction of the Bureau of Immigration and Naturalization of the Department of Labor, while the documentation of vessels is today handled by the Department of Commerce, and the administration of the national quarantine system is under direction of the United States Public Health Service. However, Customs officers act at some places for these and other services.

CHICAGO'S IMPORTANCE GROWS

There are also seven comptroller districts in the United States and its possessions: New York, Boston, Philadelphia, Baltimore, New Orleans, San Francisco and Chicago. Chicago is the only inland Comptroller District and it is predicted that as the years go on it will become increasingly important due to the fact that the Atlantic and Pacific boundaries of the United States, at one time years apart, then months apart, then days apart, are now only hours apart. In other words, the time is coming when there will be tremendous increases in the volume of the commodities handled in the only inland Comptroller District of the United States. With the rapid development of the airplane and its ever increasing use as a freight carrier, and the eventual development of the Lake-to-the-Gulf waterway, much shipping will by-pass the seaboard and come to Chicago which, with its vast network of railroads, will be the transportation center of the entire United States. Economists now visualize the time when the Lake-to-the-Gulf seaway is completed and the United States will rely more on shipments of iron and ore from Labrador and South America. A vast tonnage will be unloaded in Chicago from the Atlantic seaboard and from the Gulf of Mexico. Then, too, many persons prophesy that the hub of aerial transportation in the United States and in the world will be in Chicago, where persons arriving by plane from abroad can transfer to rail lines that will take them to any point in the nation.

The Chicago Comptroller District embraces the territory of all or part of the following states: Illinois, Wisconsin, Indiana, Missouri, Iowa, Minnesota, North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, Colorado, Wyoming, Montana, and Idaho.

The duties of the Comptroller were first conceived when the thirteen original colonies were under the jurisdiction of Great Britain, which derived a very substantial revenue from tariffs and duties imposed by collectors of customs in the colonies. The Crown became suspicious that all the duties collected in the colonies were not reaching the British exchequer. In order that there might be a check, certain of the personnel on British naval ships trading with the American colonies were designated as naval officers and it was their duty upon reaching a port of entry to make a very careful audit of the Customs collectors' books. That title was maintained for many years after the Republic was established, but eventually the name was changed to Comptroller of Customs. The duties of the seven Comptroller Districts are to make a careful check on the collectors' accounts. If there is a disagreement, the dispute is referred to the Treasury Department, which is the parent of the Customs Service.

There is also a Customs Court established for adjudication of disputes between the public and the Customs and the Treasury Department, and some cases can be appealed to the United States Supreme Court.

Another interesting department of the Customs is the laboratory which makes many tests at the request of collectors of customs. Chicago has a very well-equipped and splendidly-staffed laboratory located in the Customhouse.

The investigative work is in the hands of the Customs Agency Service, which has been successful in ferreting out attempts to circumvent the law.

In more than 160 years the names of many persons who are familiar in American history have appeared on the roster of the Customs Service of the United States, including one President, the Honorable Chester A. Arthur. During the early part of the nineteenth century, the famous historian, George Bancroft, was Collector of the Port of Boston. One of Collector Bancroft's first acts was to appoint as treasurer in the Boston Customhouse, at an annual salary of \$1500, that distinguished man of letters, Nathaniel Hawthorne. Shortly after his appointment, Hawthorne, in writing to his friend Longfellow, remarked gaily: "I have no reason to doubt my capacity to fulfill the duties; for I don't know what they are." Four years later, Hawthorne was appointed Surveyor of the Port of Salem under that old veteran of Ticonderoga, General James Miller, Collector of the port. Edward Arlington Robinson, famous contemporary poet, was appointed a Special Agent at the port of New York by the late President Theodore Roosevelt. Herman Melville, author of *Moby Dick*, was an inspector at New York in his last years. Matthew A. Henson, who accompanied Admiral Robert E. Peary to the North Pole, was an employee in the customhouse at New York until his retirement for age. Horace Greeley, the world renowned New York Editor, was

once offered the appointment as Collector at the port of New York, and the present William J. Bryan, Jr., son of the Great Commoner, who many times was a candidate for President of the United States, is a Collector at the port of Los Angeles.

A highlight of the Bureau of Customs was the First International Trade Fair held jointly at Navy Pier and at the International Amphitheater, Stock Yards, in Chicago last August. Exhibitors from all over the world displayed their wares and to their great surprise accumulated orders which it is estimated reached the total of fifty million dollars. This Fair was intended primarily to acquaint Americans with the commodities that the countries throughout the world had to offer, rather than as a market to sell goods. Importers from all over the country flocked to Chicago and lauded the Customs Service for this splendid and stimulating exposition. Plans are now under way for a similar, but a much larger exposition, to be held in March, 1952, in the city of Chicago. If world conditions are favorable, the affair is certain to be held, but in the event of a war, of course the plans would be abandoned.

Much interest has been aroused, however, in the International Food Exposition to be held from June 9 to 15, 1951, at the Navy Pier. Food and delicacies from every corner of the globe will be on exhibition — a veritable Paradise for the gourmet.

ELECTRIC SERVICE IN CHICAGO

WILLIAM H. BROMAGE¹

IT is almost impossible to imagine a Chicago without electricity. Yet only seventy years ago electricity was just being developed for practical use. Today, nearly every phase of life in every American city and town is indivisibly tied to this miracle of the modern age.

Throughout the history of the world there probably has been no secular devel-

opment that has eased man's burden, and woman's too, as much as electricity. At the same time it has taken the load from man's muscles it has permitted one man to do the work of ten, or a hundred. Electricity can run a small sewing machine, or it can send a 50,000 ton warship racing

¹News Service Manager of Commonwealth Edison Company

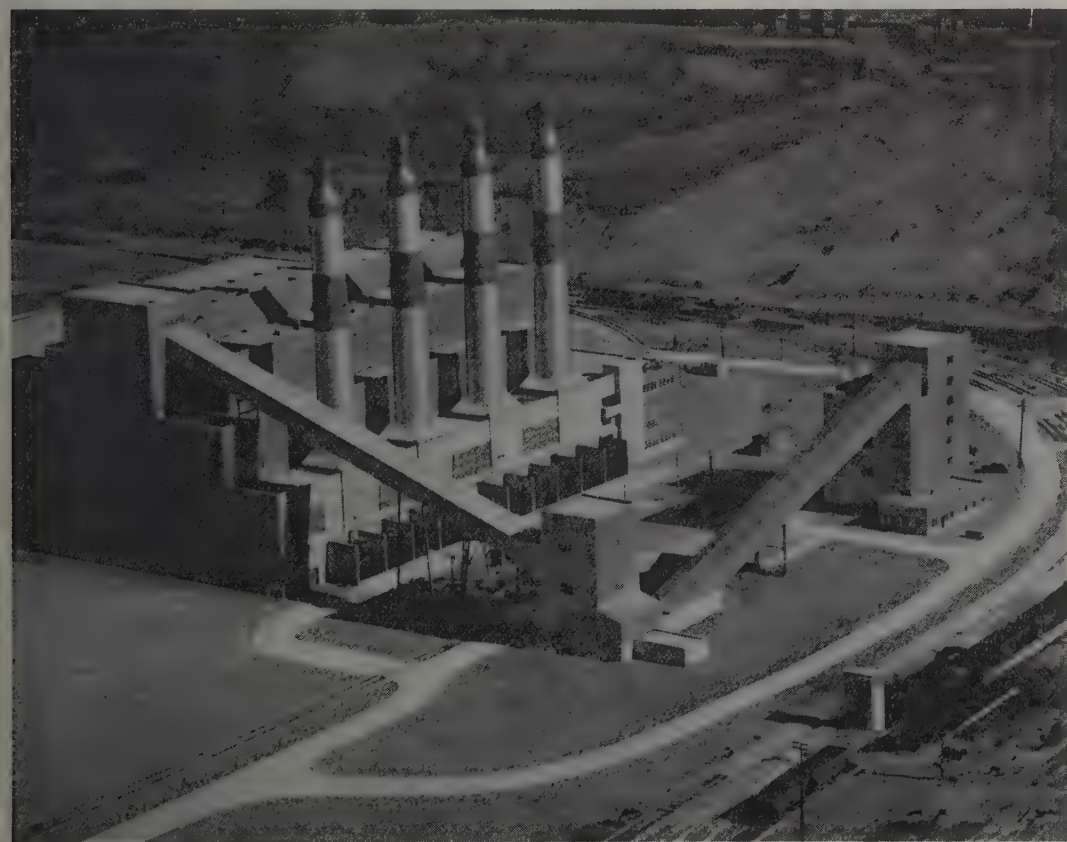
through the sea. It will operate a small clock or a twenty-ton power press. It will carry a message across a street or across a continent.

It was only sixty-nine years ago, in 1882, that Thomas Edison threw a switch that meant the culmination of decades, even centuries, of research and experiment in electricity. In 1882 was built the first central generating station that would produce electricity to light stores and offices. It was the first real powerhouse. Man at last had learned how to make electricity at a central source and to transmit it from the point of generation to the point of use.

The first Edison station was built in Appleton, Wisconsin. Later the same year, 1882, the famous Pearl Street Station was completed in New York City.

The first Edison Station in Chicago, a small plant, was installed in the basement of a building on Wabash Avenue near Randolph Street in 1884. This was the first of several small stations which furnished electricity to the downtown area of Chicago, principally for lighting purposes.

In 1903 the first all-steam turbine generating station in America was built at 1111 West Cermak Road. It was the famous Fisk Station of Commonwealth Edison Company which since has grown to be the largest plant producing electricity today for Chicago and Northern Illinois. Units of 5,000 kilowatts, extremely large for that period, were installed. The new development outmoded all previous installations, which ultimately were shut down. The era of intensive growth in the use of electricity in Chicago had arrived.



Ridgeland — Newest Generating Station

A POWER SYSTEM

Modern Chicago is served by one of the greatest power systems in the world. The system, composed of Commonwealth Edison Company and Public Service Company of Northern Illinois, serves a population of more than 5,500,000 in an area of approximately 11,000 square miles in Northern Illinois, including the city of Chicago. Commonwealth furnishes service within the city and Public Service in the adjoining area.

Today there are more than one million customers getting electric service in the city of Chicago alone. In the Northern

Powerton station at Pekin, Illinois, most distant of the eleven, is connected directly with Chicago by a 220,000-volt overhead line. Powerton is connected also with a 132,000-volt system which links the other stations together and ties them with the Chicago underground lines. The whole system is operated as an integrated unit and generation is assigned to each station so as to obtain the maximum economy consistent with safe, reliable service.

The six generating stations in the immediate Chicago vicinity are Fisk at 1111 West Cermak Road; Crawford



Fisk—First All-Steam Turbine Station in America

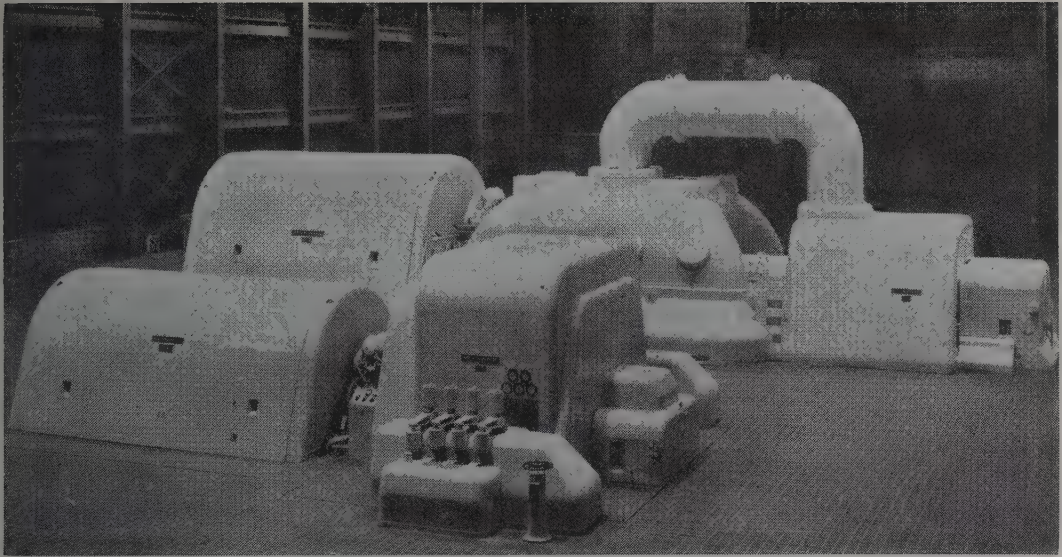
Illinois area served by the system, including Chicago, the number of customers approximate 1,600,000.

The system operates eleven generating stations with a present capacity of approximately 2,800,000 kilowatts and with scheduled additions now under way will approximate 3,400,000 kilowatts by the end of 1953. The stations are all interconnected by transmission lines of various voltages. Six stations in the immediate Chicago vicinity are connected by 66,000-volt underground lines.

at 3501 South Pulaski Road; Northwest at 3400 North California; Calumet at 3200 East 100th Street; Ridgeland at 4300 South Ridgeland Avenue; and State Line, located on Lake Michigan at the Illinois-Indiana boundary.

Outside of Chicago are five stations. These are located at Waukegan, Joliet, Dixon, Aurora, and Pekin.

Tremendous increases in the use of electricity have taken place in the last thirty years and this has required frequent additions to generating capacity. Since 1929



The New 150,000 Kilowatt Generating Unit — Ridgeland Station

there has been an increase of approximately 70 per cent in production capacity.

Since the end of World War II a continuing increase in demand has occurred and with it a corresponding growth in facilities. Since the war the system has installed in excess of 500,000 kilowatts of capacity, bringing the total to approximately 2,800,000 kilowatts at the present time. For the next four years there is scheduled the construction of more than 600,000. This total of 1,100,000 kilowatts will bring the system capacity to more than 3,400,000 kilowatts. This capacity will be double that of twenty years ago.

In excess of \$400,000,000 already has been spent by the system for expansion purposes and by the end of 1954 this total is expected to exceed \$750,000,000, most of which is for electric generating and distribution facilities.

Most recent of the additions to generating capacity is the new Ridgeland Station which was formally opened December 7, 1950. This station started service with a 150,000 kilowatt generating unit which produces enough electricity to serve a city of 300,000 population. Another unit of

similar size is scheduled for completion in the summer of 1951.

Two more units of the same size were ordered in 1950 and are scheduled for completion in 1953. It is noteworthy that more than three years is required for the building and installation of large generating units.

When the four Ridgeland units are in service the capacity for which the station was designed will have been reached. The four units with a total capacity of 600,000 kilowatts will be large enough to serve a city of more than 1,000,000 population.

In the Chicago area there can be no question but that the most economical method of producing electricity is by the use of steam-driven generators with coal as fuel. The almost limitless reserves of coal in Central Illinois makes this the practical fuel. The eleven generating stations of the system require approximately ten million tons of coal a year, which is equivalent to about one-sixth of the output of Illinois mines.

Most of the coal comes from central Illinois mines. It arrives at the generating stations by barge or rail or both. All stations are equipped to receive coal by



Car Dumper

rail and six are equipped to receive the fuel by barge as well. Approximately half of the coal consumed by the system arrives by barge. The barged coal is first transported by rail from the mines to a loading dock located at Havana, Illinois, where it is transferred to barge and carried up the Illinois waterway to Chicago stations, about 200 miles away.

To insure adequate fuel in the event of interruption of mining or transportation, huge reserve stockpiles are maintained. These stockpiles, all located within the grounds of the station, exceed 3,200,000 tons, or enough to operate the stations for a period of about 120 days at the normal rate of consumption.

While coal normally constitutes more than 90 per cent of the fuel consumed by the system, most stations are equipped to burn alternate fuels. More than half of the capacity of the system is equipped to burn oil or gas as they may be available in the event of a coal emergency.

GENERATION AND DISTRIBUTION

Generating stations, because of their size and location above ground, are generally thought to be the most important part of an electric utility system. However, the substations, the cables buried under the streets, the transformers, and the poles and lines in the alleys, and other equipment involved in the transmission and

distribution of electricity to the customer are equally important and account for something more than half of the total investment.

The transmission system is the means by which the generating stations are tied together to form a co-ordinated unit to send the energy from the generating station to the substation and large industrial customers. The distribution system is the medium by which the energy finally reaches the customer at his home, store, office, or factory.

Electricity is generated in Chicago at either 12,000 volts or 9,000 volts. It is transmitted, in most cases, sometimes at much higher voltages, to substations where it is transformed or converted for utilization. The distribution system with which most Chicagoans are familiar is what is called "the 4,000 volt radial system" which serves homes, stores, and small industries in the area outside of the loop. There are other types of distribution, depending on location and the nature of the utilization.

In the city of Chicago alone there are 92 substations owned by the Edison Company. To carry the energy underground there are 9,150 miles of ducts under the streets which carry 5,400 miles of cable of various sizes and voltages. There are more than 22,400 manholes, varying in size from small ones to the extremely large and deep ones which are found in the loop.

In the 4,000 volt radial system, the energy is carried underground to load centers where it is brought overhead to the wires and transformers placed on poles in the alleys or on private property. In the overhead portion of this system in Chicago there are 148,700 poles carrying 14,000 miles of wires and approximately 39,900 transformers. About 85 per cent of the poles are owned jointly with the telephone company to effect economies and reduce congestion in the alleys.

OLD STURBRIDGE VILLAGE

EARLE W. NEWTON¹



The Museum's Principal Building is a Crafts Center

FOR a good century and a half after the establishment of the United States, citizens of that nation learned about the American past almost solely from words imprinted on the pages of books; and in the case of schoolteaching, this means textbooks. But in the last twenty-five years, educators have more and more come to realize that information and knowledge can be conveyed not only by words but by visualization, and they have not only improved but also made more interesting the study of history by the use of pictures, films, recordings, and a multitude of audio-visual techniques.

But even a picture projected on a screen is an inadequate substitute for the real thing. For one thing, it lacks the third dimension, as well as appeal to other senses than the visual. But in the field of history, the real things are mostly past and gone, and exist in the third dimension only in our museums. Yet our museums have been characterized, and with some justice, as marble mausoleums of the past, which collect materials and relics, or fine arts objects, but which do not give their audience a full sense of reality. The difficulty seems to lie in the fact that historical

¹Director

museums have adopted the architectural standards of the art and science museums, which are very poorly adapted to the interpretive job which a history museum must do.

However, a new trend is rapidly growing which holds great promise for educational work in the field of history. Our endeavors to preserve evidences of past history are no longer confined to books and manuscripts, nor even to fine arts objects, but extend to the common objects of everyday living, from hay rakes to houses. But, perhaps most exciting of all, these objects which help to give us such a real picture of the past as it was lived by Americans are being housed in their natural environment. The "outdoor museum" holds the greatest promise for development in the field of museum work, for in these museums representative structures from the past, either preserved or reconstructed, house the historical collections. And in many cases the exhibits are brought alive by demonstrators who carry on home activities or craft work in the manner of 100 or 150 years ago.

Most people are well acquainted with the great Rockefeller-financed restoration

at Colonial Williamsburg. Teachers and the general public are not so well acquainted with many of the other projects of a similar character which are interpreting phases of America's past. Each develops its story in terms of a certain subject, or within a given regional scope, whether it be original settlement, revolutionary political life, seafaring, gold-rush days, or the social and economic growth of New England over a century of its life.



In the Village Weave Shop



Checking Grain

It is the latter field which is interpreted by Old Sturbridge Village, one of the newest and withal one of the largest "living museums" in the country. At Sturbridge, Massachusetts, where the main Albany-to-Boston turnpike meets with the Connecticut parkway extensions from New York City, this reconstructed community of over thirty representative structures has evolved during the last fifteen years. Building began in 1936 where there was nothing but forests and fields, and by 1946 sufficient structures were ready to open the Village to the public. In the last five years attendance has increased each year almost faster than Village authorities have been able to construct facilities to care for it. Nearly 140,000



A Metalsmith at Work

people have visited the more than thirty buildings now open to the public, each manned by a hostess or a working craftsman. Already Old Sturbridge stands second only to Henry Ford's Greenfield Village in the number of exhibition buildings fully staffed and open for inspection.

These buildings were drawn from various parts of New England, in an attempt to reconstruct a "representative" New England community. The Village Meeting House represents the spiritual life of the community; the great Tavern, the social and recreational life; Miner Grant's General Store, the commercial life; the Dennison School, the educational life; and the various residences with their period rooms the home life of the community. A Grist Mill which grinds, between old French burr stones, whole grain flour; a Blacksmith Shop, where the smithy turns out wrought iron or shoes the Village horses; the Village Farm, which actually operates with animal power as of old: these are among the structures which characterize the basic economic life of New England 150 years ago. In addition there are a multitude of craft shops, with their working craftsmen, who supplemented the economic life of the community and made available to it the many items of household, commercial, and industrial use which did not then flow in from distant

factories as they do today. The weaver, the pewterer, the metalsmith, the cabinet maker, the furniture finisher, the candle-maker, the potter, the coppersmith, the printer, the glass blower — all have their own shops in the craft area.

SPIRIT OF THE PAST RE-CREATED

Visitors are often surprised to find that these craftsmen do not confine their activities solely to the making of reproductions of the valuable antiques in the Village collections. But the Village is anxious to re-create the spirit of the past as well as its physical aspect. Craftsmen of the 18th century did not make replicas of things their grandfathers had made. They evolved their own designs and, with the best tools available to them, made a reputable product, carrying the production process through from design to sale. It is in this fashion that the Old Sturbridge craftsmen work, for the most part designing their own products, and using such tools as are now available to the hand-craftsman. In many instances the processes are almost identical; in others, they have changed somewhat, though the basic principles have remained the same. When the latter is the case, a period craft shop with a demonstrator is often set up, supplemented by the extensive collections of related antiques and an interpretive exhibit, showing the evolution of the craft from past to present. The visitor then sees the modern craft being pursued, but with the spirit of Yankee craftsmanship.

Lovers of antiques will find the Village a treasure house for, in addition to those which are used to furnish the houses, public buildings, and shops, there are massive collections for special examination by those interested. The J. Cheney Wells collection of clocks is one of the nation's most extensive. The lighting devices collection contains thousands of examples from the distant past. A collection of woodenware is almost unsurpassed. And there are also collections of glass, pewter, silver, pottery, guns, toys, tin-

ware, and, perhaps most interesting of all, Yankee tools and gadgets.

It was in the collection of the latter that the project began. Mr. Albert B. Wells, former head of the world's largest optical company, located in Southbridge, Massachusetts, found himself fascinated by these evidences of Yankee ingenuity and began collecting them. His interest expanded into the field of the products of these tools and of the people who made them. When he had collected himself out of house and home, he projected a standard marble museum to house them for public examination. But his son, George B. Wells, now chairman of the board of trustees, suggested that these magnificent collections be put back in their "natural environment." The result was the building of a New England village on the banks of the Quinebaug River in Sturbridge.

Today Old Sturbridge Village is completing a new Lodge, a Toll House, a Handcraft House, and dining rooms in its Village Tavern to care for the thousands

of visitors who are stopping at this cross-roads of New England to see Albert Wells' collections and the village which grew up around them. It plays host to many groups, educational and club, adult and youth. School groups are admitted at rates which barely cover the Government taxes, and an educational program to dramatize the Village for New England schools is now in preparation. Educational potentialities are almost unlimited, and the Village staff looks forward to developing an extension program to reach even beyond the visitors. In fact, it thinks of itself as a New England historical society, and is playing the central role in establishing a new Institute of New England History and Culture for scholarly research and its publication.

Nor is Sturbridge unique. At Coopers-town, New York; Columbia, California; Mystic, Connecticut; and in many other centers, similar outdoor museums are recreating the past for the present in a dramatic and colorful fashion.

NOTES FROM THE FIELD

We Salute Koyamadi Senior High School

RACHEL WALTERS

CARVER HIGH SCHOOL

THROUGH the eyes of Japanese students, teachers, and parents, Carver High School has had a glimpse into Koyamadi Senior High School in Tokyo, Japan. Early in October, 1950, an appeal was made by Kazutake Watanabe, director of the school, to an instructor at the Chicago Teachers College¹ for examples of work done in the biology department of an American high school. The school was to hold an open house from October 30 to November 4; thousands of students, teachers, and laymen would attend. The request for material was referred to me and I asked for volunteer assistance from my students, who had already been corresponding with Japanese children.

We wanted to give them a good cross section of the type of work done in biology in a public high school in Chicago. Therefore, we sent leaf

and flower collections, bird notebooks, examples of laboratory exercises, and regular classroom material, such as outside reading reports and drawings. In Tokyo this material was exhibited for the three days of their open house. That the material was enthusiastically received was evident from their letters. These were very interesting, telling a story about and giving us an insight into the high schools of Tokyo. We have reprinted them exactly as they were written; the spelling, punctuation, and sentence structure are unchanged, thus giving the reader a better picture than could be obtained from a summary.

An excerpt from Mr. Watanabe's first letter:

Well, the materials you sent us caused a big sensation in the school. It is rare that we get those

¹Thomas M. Thompson, formerly chairman of the Department of Education

things from America, and all the teachers are very proud about it. Many teachers offered their help. One English teacher will ask his students to translate the material into Japanese. The art teacher will make his students take photographs. The principal will keep these materials in his school parlor to show to the visitors. Anyway my son Tomomichi is so happy that he could make some contribution to the school. Several boys wrote thank you letters, but as they are long and heavy for the mail I just enclosed two of them. The boys would like to send their works to the friends in your school. It was a big encouragement really.

All the boys and girls in the Biology sections are working very hard now to exhibit their works. They use one large room for their exhibition. My son comes back around ten o'clock every night from school. It takes so much time to decorate the room for the occasion. Chemistry, sociology, etc., all have their special rooms for their exhibition. Anyway thousands of their parents and friends visit these rooms and grounds, it is a very noteworthy occasion.

I do not remember the exact number of students of this school, but I should think at least over 1,500. It is a senior high school. (6 years in primary school, 3 years in junior high and 3 years in this senior high) and then 4 years in university. That is the present, I mean post-war system of education in Japan. Until the U. S. reformation of school system, it was 6 in primary, 5 in high school, 3 in college and 3 in university.

English language is compulsory in every high school up to university. (It has been so for over fifty years.) German and other modern language is selective.

Education reformation is doing a serious change in Japan. There are a great many difficulties, mostly financial but on the whole U. S. change is doing good, I think.

Excerpt from another letter received from Mr. Watanabe:

The whole school is opened for three days to parents, friends and to the public. It is a municipal senior high school. Three years course for boys and girls from 16 to 19 years old. It has 25 classes, 50 in each class. During the festival they have athletic meets, oratorical contests, lectures, dramatics, concerts, movies, etc. All the class rooms are used for exhibitions for over a dozen clubs (student activities) Physics, chemistry, history, photography, psychology, sociology, biology, manual training, etc. My son happens to be the president of the biology club. He thought of exhibiting some materials from American schools in order to show Japanese how similar or how different are their work compared with ours, both in quantity and quality, and also in point of emphasis.

Boys worked day and night. Two nights they worked all night until seven o'clock in the next morning. They were worn out when the whole thing was completed. Thousands of people thronged to rooms and looked at those exhibitions. Some earnest teachers from outside copied some of the exhibitions with a pencil on a sheet of paper. They must be interested in the method of teaching in American schools. The advisor teacher of Tomomichi's school wants to send some materials made by Japanese students to you sometime in the future. Anyway I am sending you two snapshots taken by the photo club of the school. As they are amateurs pictures are not good, but you can get the general idea about the U. S. corner of the exhibition room. The English written on the materials were translated into Japanese so that everyone can understand what it means. It occupied one whole wall to display. The person in white coat is the advisor teacher.



Koyamadi High School Students



Corner Exhibit at Koyamadi

Your kind help meant so much to the international and inter-racial understanding and friendship. It was a practical demonstration how we of different nations and races can get together and help each other. It alone was a very significant event. Thank you again for your quick response and actual help. The principal and the whole faculty thank you too.

Please thank your good students for their willingness to show their works. They are really nicely done. All the students in the photograph are members of the biology club and want to send their best regards to the students of your school.

Very gratefully yours

Kazutake Watanabe

The letters we received from the students reflect their enthusiasm. The first letter came from Mr. Watanabe's son, who is president of the biology club. He is a very serious boy, seldom smiles or speaks, having been affected by the past war, as he and his family lived through the bombing of Tokyo. The following letter is reproduced exactly as written by the student.

Dear Friends

I have received your material on October 5th.

I have been very busy for examination, and I am sorry that I have been so long in answering your letter.

I hope this is to be beginning of a long friendship.

We are glad to get your things.

I am seventeen years old, and in the second year of school. I attend the Koyamadi Senior High School in Tokyo.

My studies are English, Algebra, World History and Chemistry. I had biology as a course last year.

Our school has many clubs.

There are biology, chemistry, archaeology and geology clubs, etc. There are about fifty clubs in my school.

About eighty students in our biology club. At our exhibition, we shall exhibit your material.

I am interested in the relationship between animals and temperature.

And now, I keep mice in my study room and Bull-Frog also in a box of my garden.

But it will not be easy for me to study through this study in a month or so.

I intend to spend the greater part in this winter in it. Please write and let me know of your study.

I shall be writing the contents of my study in the next letter. I intend to send it in a few days.

Thank you again for your kindness.

Your friend

Tomomichi

Another student writes:

Dear friends,

Thank you so much for your kindness letteres. How happy we are! We waited for a long time. Can you enagin you letters pleased us? They will be arrage with our report, with a glorious delight.

As a rule it is bad thing to arrange only Japanese things, because it do not show all worlds study. Isn't it?

Now I will say about myself. I'm a boy, seventeen. I have a older brother and a older sister, of course I have parents. I'm a student of Koyamadi High Scholl. I'm about 5 feet 2 inches. I'm little do you think so? But the Lilliptian is smaller than I. (Did you every read "Gariver's travels")

When this letter reach you, I shall extend about one inch.

I like English very much and find it very interesting and difficult. I know every type of sentence by using relative pronoun, infinitive, participle, clause, phrase, conjunction, mood, etc.

If I should use them you cannot understand my saying. (You will think at first what a foolish fellow he is. And you will despise me. Isn't it? So my sentence is very very very childish. To speak a truth I cannot master English very well.

I like baseball and tennis very much.

I'm collecting stamps, and I have about 1000 different.

I wish to correspond with you. Have you a experience of correspondence? It is a very nice thing. I like your country very much. It is a very large and strong, by that strength our country is kept more peacefully. I must study so I stop her today, waiting from yours.

I will write more majestically, gracefully, innocently, interestingly in next letter.

If I had mistakes please allow me. (Perhaps I have many.)

I'm very very very very very very 10000 busy and slepy.

Sincerely yours,
Takashi Kasakura

Carver High School students were impressed by the fact that the Japanese students wrote English so well, that it is a required subject, and that their course of study is the same as that taught in the public high schools in America. It is interesting to notice the way the Japanese teachers correlated English and art activities with biology. The influence of the American occupation can be seen in their work.

This project has helped to broaden the viewpoints of our students and make them more world-conscious. They are now looking forward to receiving samples of the work done in a Japanese high school.

NEW TEACHING AIDS

EDITED BY JOSEPH J. URBANCEK

CHICAGO TEACHERS COLLEGE

Contributors to this section are Joseph Chada, Chester Colson, Mary E. Flynn, Charles R. Monroe, and Joseph J. Urbancek.

AUDIO-VISUAL SERVICE

Filmstrips for Classroom Use in the Chicago Public Schools. A 43-page brochure, obtainable through the Division of Visual Education, 2230 West Cortland Street, Chicago, Illinois. Free to Chicago Public Schools.

A new service is being provided classroom teachers in the public schools of Chicago. Filmstrips are now available for use by the teachers and may be kept for a period of three weeks. The same delivery and pick-up service as is now used for films will be employed.

The brochure (which can be on file in the principal's office) is divided into three sections: (a) lists titles of the series of filmstrips with their call numbers and the titles of each filmstrip in the series; (b) lists the individual filmstrips alphabetically and groups them into curriculum areas with appropriate call numbers; and (c) alphabetically lists the sets of filmstrips by call number and follows each set with a factual description of content and suggestions of contributions the filmstrips make to specific learning situations.

Although there is a dearth of materials for some curriculum areas, this doubtless will be overcome by new selections in the future; additional

curriculum areas are likely to be chosen as experience with this type of visual aid grows.

This service is highly recommended to the classroom teachers and principals. The brochure will be exceedingly helpful. J. J. U.

FILMS

Washington Irving. 17 minutes. 16 mm sound. Black and white, \$85. Teacher's guide included. Released and distributed by Encyclopaedia Britannica Films, Inc., Wilmette, Illinois. Produced by Emerson Film Corporation, Hollywood, California. Also available through E. B. F. rental library.

According to the teacher's guide, this film was planned to "dramatize events in the life of Washington Irving which related to the writing of his most representative works, establish Irving as 'the father of the American short story'..... and bring to life such legendary characters as Ichabod Crane, Rip Van Winkle and Diedrich Knickerbocker." Unfortunately it is too crowded and diffuse and too lacking in unity and emphasis to realize its objective. Moreover the stilted dialogue and action, the sentimentalism in the family scenes, and the melodramatic entrance of the legendary characters at the end would do little

to impress young people with the true flavor of Irving's character or to give them a feeling for the Hudson River area that he knew so well and re-created so atmospherically. Not recommended.
M. E. F.

The following films are available through International Film Bureau, Inc., 6 North Michigan Avenue, Chicago 2, Illinois.

Fiddle De Dee. 4 minutes. 16 mm sound. Color, \$29.75. Rhythm and color are integrated to the tune of "Listen to the Mocking Bird." The entire film consists of a continuous flow of rapidly changing all-over patterns, abstract in style. Interesting textures and an unlimited number of color combinations are employed. Stimulates interest in color and design.

Stars and Stripes. 3 minutes. 16 mm sound. Color, \$29.75. A very imaginative film consisting of rapidly moving patterns. Star-like symbols and stripes perform acrobatics to the tune of a John Philip Sousa march. An excellent motivation for color and pattern design.

Model Houses. 5½ minutes. 16 mm sound. Color, \$50. A group plans and builds a model community. The film shows children designing buildings from the drawing board stage to the final model. Cardboard, paste, and other familiar materials are employed. Practical suggestions for construction are made throughout the film.

Hen Hop. 4 minutes. 16 mm sound. Color, \$29.75. Geometric elements gaily dance across the screen gradually assembling themselves into a hen. An egg with feet and the hen dance to the accompaniment of well-known waltzes and reels. This film should appeal to all age levels.

Design To Music. 5½ minutes. 16 mm sound. Color, \$50. An interesting analogy between music and art. Both children and grown-ups are shown interpreting music through line, color, and shape.

Paper Sculpture. 5½ minutes. 16 mm sound. Color, \$50. Shows children creating a variety of objects constructed from colored paper, cardboard, and then being painted. The versatility of this medium is illustrated by the fact that while some work alone others form a group and create a model circus. Originality rather than copying is stressed. Construction is good and simplicity rather than over-decoration is featured.

Finger Painting. 5½ minutes. 16 mm sound. Color, \$50. Shows children using this medium for the first time and others who have had previous experience. The subject is rather well covered illustrating how variety is obtained by using hand in various positions. Also of value is a demonstration of how one can make his own finger paints.

Brush In Action. 10 minutes. 16 mm sound. Black and white, \$50. Stresses brush technique for water color painting. Shows both the round and flat brush and the variety of strokes that may be obtained from them. Surface texture and control of washes are also illustrated. The film ends with the painting of a rural scene employing the aforementioned brushes.
C. C.

American Biographical Series: (1) *Robert Cavalier Sieur de LaSalle* (460), Grace Lee Nute,

Collaborator; (2) *Daniel Boone* (461), Thomas D. Clark, Collaborator; (3) *Lewis and Clark* (462), Dan E. Clark, Collaborator; and (4) *John Charles Fremont* (463), Allan Nevins, Collaborator. 17 minutes each. 16 mm sound. Black and white, \$76.50 each; rental, \$5 for 1-3 days. Distributed by Encyclopaedia Britannica Films, Inc., Wilmette, Illinois, and produced in collaboration with the Emerson Film Corporation, Hollywood.

All four films are made on a common pattern, although slight differences in value and quality may be detected. The reviewers found the LaSalle and Fremont films better than the Boone and Lewis and Clark films. In general, these films are designed for the junior high school students, although upper grade pupils and high school students would find them interesting. Adults and college students will find the films superficial and trite. Photography is superb; background landscapes are excellent; sound recording is good; and musical settings are effective. Instances of muffled or indistinct voices are caused by the speakers, not the technicians.

Each film relates the important episodes in the lives of the individuals concerned, and some of their more romantic and amusing incidents. The Hollywood influence is revealed in that life stories are narrated with emotion and dramatic climax, a desirable, interest-arousing technique, as evidenced in a college history class. The narratives are brief; in fact, they are often so sketchy as to make following the story difficult. The reviewers wonder if it would not be better to give more space to fewer episodes, even though the biographies would necessarily be incomplete.

All of the films suffer from cheap production so characteristic of class B or C films. Most of the parts are played by amateurs who portray their characters in a stilted, unconvincing manner. The roles of LaSalle and Fremont were played in a professional style, but Daniel Boone and his son would barely rate an eighth grade pageant. The parts of Kit Carson and Sacajawea were played realistically. Students criticized the Fremont film for showing Jessie Benton as young at the end of the film as at the beginning. Better dramatic talent would make first class films out of these now most commendable biographical films.

Special credit should be given for the fairness with which all racial and national groups are introduced and portrayed. The use of contemporary maps is commendable, as well as the accuracy of the historical details. Superposition of maps on landscape shots should be discouraged.
C. R. M. and J. C.

NEWS

EDITED BY GEORGE J. STEINER

CHICAGO TEACHERS COLLEGE

AMERICAN ASSOCIATION OF SCHOOL ADMINISTRATORS—Worth McClure, executive secretary of the American Association of School Administrators, summed up the responsibilities of the schools in the “not-so-cold-war” as discussed at the February conventions, as follows:

1. Renewed emphasis on spiritual and moral values in every school subject and every phase of school life along lines described by the Educational Policies Commission report, “Moral and Spiritual Values in the Public Schools.”
2. More emphasis on values of American citizenship or how people live under our free institutions as contrasted with life in the communist-controlled states.
3. More attention to the role of the United States in the United Nations.
4. Exchange of public school teachers with the other free nations must be greatly stepped up. We need to reach peoples instead of only governments as we are now doing.
5. Pupils of sufficient maturity must be safeguarded against enemy propaganda by learning what the techniques are and how to detect them.
6. Education for health and physical education will need to be stepped up and school health services strengthened. This means co-operation with parents and doctors without taking over parental responsibilities.
7. Youth may again be earning more money than it knows how to handle wisely as war industries expand. Schools need to stress the teaching of thrift.
8. Children “on the loose” may become social casualties. Working parents and especially working mothers in war industry centers may again make necessary the provision of extended-day care centers and nursery schools.
9. The schools must stress more than ever the care and wise usage of America’s vast natural resources. The AASA 1951 Yearbook, *Conservation Education in American Schools*, is at once a challenge to the schools and a guide for constructive action.
10. Along with all these special responsibilities which the schools must share, they must do a better job than ever on the tool subjects—the traditional three R’s and the other fundamentals of 1951, such as geography, history, civics, and the fine and practical arts.

CHICAGO’S KINDERGARTEN ENROLLMENTS—There will be approximately 45,000 more kindergarten pupils enrolled in the Chicago public schools during the next five years than were enrolled in the past five years. During World War II, the kindergarten enrollment averaged about 24,000 per year; since the war it has averaged about 32,000; in the next five years it will average

about 41,000. The kindergarten enrollment predictions for the next five years are based on the birth rates of 1946-1950. Additional pupils will number about 9,000 per year more than at present. As they proceed upward through the grades, they will swell total enrollments for years ahead, raising problems of more classrooms, more teachers, more instructional materials, and more funds with which to provide for these needs.

COMMISSION ON HIGHER EDUCATION — President Truman’s Commission on Higher Education reports that almost one-half of the nation’s youth have the mental capacity to profit by two years of study above the high-school level. Almost one-third of the nation’s youth have the capacity to complete a college education. Many are barred from such study because of economic, racial, or religious restrictions.

DU PONT FELLOWSHIPS — Seventy-eight postgraduate and post-doctoral fellowships amounting to \$390,400 have been awarded by the Du Pont Company for the 1951-52 academic year to forty-seven universities, and grants-in-aid to ten universities to “stock-pile” knowledge through the advancement of fundamental research.

The universities themselves select the research projects for which the grants will be used, the only stipulation being that they be free from any commercial implications at the time the work is initiated. There is complete freedom in the communication and publication of the results of the research work supported by the grants. The selection of candidates for fellowships and the choice of problems on which they are to work are left to the universities which receive the awards. Individuals are under no obligation with respect to employment after completing work under this plan.

Of the seventy-five postgraduate fellowships to be awarded, all of which are pre-doctoral, forty-five are in chemistry, fifteen in chemical engineering, five in mechanical engineering, three in physics, two in metallurgy, one in biochemistry, and one in biology. The six post-doctoral fellowships are for work in chemistry. They are designed to serve as an incentive to individuals who wish to enter industrial research work as well as those who prefer to remain in academic work and who would be qualified for staff positions on graduate faculties.

PERIODICALS

EDITED BY GEORGE W. CONNELLY

CHICAGO TEACHERS COLLEGE

"Summary of Research Concerning English Usage." By Mildred A. Dawson. *Elementary English*, March, 1951.

From time to time an article appears which shows promise of being able to replace assumption by fact in the area of the development of proper English usage. Miss Dawson's article appears to be one of that nature.

A careful reading of the entire article is, of course, required if one is to "do it justice." However, some of the major conclusions are listed here. The teacher who wishes to improve her language usage instruction must know which language expressions are now considered acceptable by authorities in the field and which are "so illiterate that they are considered crucial in the usage curriculum." After ascertaining the usages recommended for consideration, the teacher must give close attention to the language usage of her pupils in order to be certain to include only those items which they misuse.

The teacher's second problem lies in the "selection and proper use of effective methods of instruction." Because pupils naturally differ as to the "identity of the language errors they make," a good deal of the instruction should be individualized. Furthermore, children should be led to find and correct their own errors. Research has shown that "drill on items of usage should be oral, that children learn well if they are led to choose between right and wrong forms after they have been shown which is right," that drill is more beneficial to dull children than to brighter children, and that only bright pupils are likely to put a "knowledge of grammatical principles into practice."

Research has assured us that "neither a study of grammar nor of rules is likely to improve speech and writing"; instead, it is more effective to teach skills directly "whenever need for them arises throughout the school day."

Doubtless many teachers would feel inclined to disagree with Miss Dawson with reference to some of her conclusions. However, their bases for disagreement ought to be at least as well documented as are the bases of Miss Dawson's conclusions.

"The Changing Role of Paper-and-Pencil Tests in Evaluating Educational Outcomes." By Douglas E. Scates. *The High School Journal*, April, 1951.

Mr. Scates discusses the value of paper-and-pencil tests in the total scheme of educational evaluation and notes the ways in which their role

is changing. He states that paper-and-pencil tests for use in the classroom "are coming to be seen against a broader background of evaluative or appraisal procedures." No small amount of credit for this development is due to the curriculum workers for their helpful influence on the teacher in connection with assisting him to assess the effectiveness of his teaching and the growth of the pupils.

Another major development in the use of paper-and-pencil tests is their use by teachers more as a means of guidance and less as a means of simply marking pupils.

A third important emergence in the use of the paper-and-pencil test is "that progress is being made in the direction of assessing quality of knowledge and quality of thought." For facility in the use of knowledge, though dependent "to some extent on one's native capacity, . . . also depends in some large degree on the quality with which learning has taken place."

Dr. Scates states that there is an increasing conviction that "pupils from schools which spend more money may not show greater knowledge than pupils from poorer schools, but they do show a much higher quality of knowledge." Accordingly, the analysis of aspects of quality and the preparation of tests to measure them promises to be the area "of our next great development in the testing field."

"Testing Reading 'With a Book.'" By E. W. Dolch. *Elementary English*, March, 1951.

Dr. Dolch reports the use of an ordinary book as a means of testing a student's reading without the usual reading test. This method of testing "is especially recommended for guidance interviews where the self-confidence of the student must be maintained."

The procedure recommended is that of saying to the interviewee, "Well let's see how the reading goes?" as you hand him a book which is on his level of ability. Then as the child reads you "feed" him instantly those words on which he stumbles. Quite logically the student requires one kind of treatment if he misses common words, and another kind if he misses uncommon or "hard" words.

The next step is to have the child close his book and tell you as much as he can of what he has read.

The third step is to have the student read aloud the next section. This time, however, he should

not be coached on "difficult" words. Rather, he should be told to skip the words and read on to the end of the sentence. Then he should be asked what he thinks the missing words are. This time the student should not be told the meaning of a word until he "has tried his best to get it from the context."

The fourth step is to have the student read on through another section, giving him no help with the unknown words, but trying to find out "if the student has any method of word attack." Can he tell you how the "new" words start? Perhaps he could use the letter by letter method of sounding new words if he tried. A sub-part of this step is to see if the student can attack a new word by word-parts. Perhaps he could attack a word by noting prefixes or suffixes and by dividing words into syllables, but has never been pressed to do so.

Through the above steps the teacher can learn what teaching or practice a student requires. "Any grade on a formal reading test is, for each individual, an unknown mixture of all the four things mentioned as well as others, and must be followed in any case with just this four step test anyway."

The practice of "testing reading with a book" is in harmony with the basic principle that the "best test of an activity is the activity itself." True, the standard reading tests are valuable, especially in connection with testing large groups. However, with only one student, the best means of seeing how he reads is to have him read, using the "checks and controls" suggested above.

"Effects of Two Patterns of High School Training on College Achievement." By Kermit A. Cook. *The School Review*, March, 1951.

Mr. Cook here reports a study comparing the academic achievement in West Virginia University of two matched groups of graduates of two West Virginia high schools whose educational programs were characterized by basic differences.

One school, the University High School, is a laboratory school wherein the educational program is based on the belief that high school pupils learn most effectively when they are provided with learning situations involving life problems. Curriculum content and all the recognized learning experiences are found in the activities of the school as a civic and social unit. These sources are drawn and organized by the teachers and students into meaningful programs designed to develop in the student "reflective and critical thinking, basic skills in learning and expression, and desirable social adjustments."

The other school, Morgantown High School, is one whose curriculum and methods are largely dominated by the traditional college-preparatory purpose. The course of study is closely prescribed

in advance, there being no teacher-pupil planning of learning experiences. The basic elements of method are "teacher-prepared assignments, class recitations, and subject matter examinations given at frequent intervals and at the end of each semester."

The conclusions of the study show that the graduates of the University High School are superior to graduates of the Morgantown High School in the quality of academic work done in West Virginia University. This superiority increases with each succeeding semester. It was manifested, among other ways, in a superiority in English, mathematics, the sciences, and the social sciences.

"Standardized Tests and Educational Objectives." By Julian C. Stanley. *Peabody Journal of Education*, January, 1951.

Mr. Stanley's article is an engaging effort to jar into a state of professional consciousness the "educator" who administers standardized tests for their own sake or as a means of keeping up with the Jones's. He points out that school people must learn to resist the pressures of test distributors, who want to sell tests, as well as those of newspapers and popular magazines, who frequently depict tests—particularly those of "aptitudes" as "panaceas for educational retardation, vocational maladjustment, and even marital discord." For parents are inclined to clamor for the cure-alls after reading incautious, one-sided articles.

Standardized tests are an important element of the total school program. But it must be remembered that "only when standardized tests are employed as an integral part of a general plan for accomplishing educational objectives can results be utilized optimally."

"Contributions of the Activity Movement to the Teaching of Arithmetic." By Lois Knowles. *The Mathematics Teacher*, March, 1951.

Miss Knowles states that the so-called activity school has received much adverse criticism, "some of it quite justly." On the other hand, the emphasis which the activity movement has placed upon the ways in which the child reacts to his environment, the way he behaves when confronted with new situations, and the teacher's part in helping him to decide on a "course of action for which he is willing to be responsible" have contributed a great deal to the practices which are used in today's elementary school.

Early excesses or errors inherent in the activity movement have been modified by research and experimentation. On the other hand, "the traditional school has taken on many of the attributes of the activity movement." Thus our children are deriving greater benefits from their experiences in school.

BOOKS

EDITED BY ELLEN M. OLSON

CHICAGO TEACHERS COLLEGE

THE PUBLIC LIBRARY INQUIRY¹

FRITZ VEIT²

A thorough evaluation of the public library scene had long been due when the Social Science Research Council undertook the appraisal of the American public library at the request of the American Library Association. The Carnegie Corporation provided \$200,000 for this purpose.

The Social Science Research Council appointed Dr. Robert D. Leigh, former President of Bennington College, as director of the study and he selected a staff of 24 to assist him in the Public Library Inquiry. The staff was composed of members of various social science disciplines: political scientists, historians, economists, and others. To assure an approach which would not be hampered by any vested interests, practicing librarians were not included in the staff.

The Inquiry concerned itself only with the free public library, the institution which is designed to serve the general public. But the Inquiry did not neglect to point out existing or potential relationships between the public library and other categories of libraries.

The Inquiry staff considered it a basic task to determine the objectives which would govern the American public library. It submitted to 210 leading librarians a set of objectives, drawn from three recent policy statements of the American Library Association. The majority of the librarians polled agreed that the public library should be the community's center of reliable information and that it should offer an opportunity for continuous education to all people of all age groups. To be in a position to render such services the library must, as is stressed by the Inquiry, acquire and administer books of cultural, educational, and informational value, as well as other media of information. It must further stimulate people in the use of these materials and offer guidance whenever necessary.

It has been brought out clearly by the Inquiry that many public libraries do not measure up to these objectives. Some librarians still believe that the taxpayer may demand anything, regardless of its cultural value; some do not wish to include within the library's scope audio-visual and other modern media of communication; and some fail to stimulate and extend library use. But, most important, many libraries are too weak and too small to render effective and complete library service.

Whether public libraries will have sufficiently

prepared personnel for performing these tasks of growing complexity will depend, in a large part, on the training librarians may obtain. If the Inquiry recommendation is carried out, all library schools will be connected with universities and colleges of high academic standing and will stress background information more heavily than techniques.

The interest which the Inquiry has aroused among all librarians—public, college and university—is unprecedented. Dr. Leigh and his staff have been invited to present and interpret the Inquiry findings at numerous library meetings, national and regional. Last year the Graduate Library School of The University of Chicago devoted a six-day conference exclusively to a discussion of the Inquiry.

The Inquiry has set itself a broader and more comprehensive task than has any previous library investigation. Its concern was "...an appraisal in sociological, cultural and human terms of the extent to which the librarians are achieving their objectives," and 'an assessment of the public library's actual and potential contribution to American society'."³

The Inquiry is to be highly commended for setting up library objectives, for analyzing the current public library scene in accordance with social science research methods appropriate to the various phases of the study, and for indicating the direction public library development should take. It would be incorrect, however, to view the Inquiry as a cornucopia from which a practicing librarian could draw ready-made answers to any and all questions which might arise. There are areas, as the investigators themselves state, where the Inquiry treatment had to be exploratory rather than definitive.

The understanding of the public library's actual and potential role in American society has been immeasurably furthered by this study. It will require the combined efforts of the librarians and all friends of the public library to reach the objectives which have been set by the Inquiry.

¹*The Public Library in the United States; the General Report of the Public Library Inquiry.* By Robert D. Leigh. New York: Columbia University Press, 1950. Pp. 272. \$3.50.

²Director of Libraries of the Chicago Teachers College and Wilson Junior College.

³op. cit., p. 3.

IMPORTANT NEW BOOKS

Contributors to this section are John S. Carter, Eve K. Clarke, Ruth M. Dyrud, Raoul R. Haas, Emily M. Hilsabeck, Louise M. Jacobs, Ursula Maethner, Elizabeth G. Masterton, Blanche B. Paulson, Dorothy F. Roberts, Eloise Rue, Eileen C. Stack, Shirley E. Stack, Joseph J. Urbancek, Rosemary Welsch, Dorothy E. Willy, and Elizabeth J. Wilson

FOR TEACHERS AND SUPERVISORS

Remo Bufano's Book of Puppetry. Edited and compiled by Arthur Richmond. New York: The Macmillan Company, 1950. Pp. 280. \$3.00.

All puppeteers will welcome this legacy from one who was an adept in the craft. The range spreads from a summary of historic origins through ingenious methods of today, and concludes with seven adapted plays. An innate gaiety wells up between the lines when the main problems of the making and manipulating of puppets and marionettes are covered. Yet essential facts have been packed in with the meticulous accuracy of one who, steeped in his art, is giving experience-tested ways of transforming mere materials into personages endowed with a peculiarly pleasurable momentum.

R. M. D.

The Theory of Camping. An Introduction to Camping in Education. By Frank L. Irwin. New York: A. S. Barnes and Company, 1950. Pp. 178. \$2.50.

An excellent discussion of the basic philosophy and objectives of camping as related to the American way of life. The book is useful to administrators and camp directors because of its general wholesome overview of camping and program suggestions; to counselors for a better understanding of the "camper" and camping as the valuable experience it should be; and to the educator for the discussion of factors which indicate that sound camping has a unique contribution to make to the educative process of our youth.

U. M.

Audio-Visual Teaching Techniques. By F. Dean McClusky. Dubuque: William C. Brown Company, 1949. Pp. 144. \$2.75.

A major portion of this text is devoted to the philosophical and psychological backgrounds of audio-visual instruction in contemporary education; a minor to methods and techniques. This treatment, however, is the intention of the author. He is attempting "to stress the basic human values rather than those of a mechanical nature. It has been my observation that teacher education in audio-visual instruction has been centered

too often in the operation of machines and, as a consequence, the students to be taught are lost from view." An interesting feature of this book is the selected list of films, slidefilms, slides, recordings, and stereographs correlated to illustrate many of the concepts presented by the text. Appendices list sources of information and materials, equipment and supplies; and provide threading charts for the motion picture projectors commonly available.

R. R. H.

Activities in Child Education. By Elizabeth Miller Lobingier. Chicago: The Pilgrim Press, 1950. Pp. 226. \$3.50.

A dependable and practicable handbook for the church school teacher and others. Drawing, painting, modeling, cutting, lettering, and dramatizing are purposeful activities covered. The Lobingier basics in the creative process are stimulation, decision, planning, and experimentation which lead to a successful completion of worthwhile expression. The book's broad aim is the fostering of constructive imagination. It points the way toward a creative way of working for both teacher and student.

R. M. D.

Selected Listing of Educational Recordings and Film Strips for More Effective Learning. 1950-51 Catalogue of Educational Services, 1702 K Street, N. W. Washington, D. C. Pp. 36. Free.

Three educational areas are covered: recordings, filmstrips, and equipment. The selections of recordings include foreign languages, history and social studies, literature, drama, poetry, folk music, speech, and some miscellaneous. Educational filmstrips include arithmetic, geography, health, social studies, foreign and English languages, reading, safety, science, and miscellaneous. The equipment listed includes projectors, tape recorders, and playback machines. Interested administrators and teachers will find it worthwhile to have a copy of the booklet for information, study, and reference.

J. J. U.

FOR HIGH SCHOOL AND COLLEGE STUDENTS

Jamestown Adventure. By Olga W. Hall-Quest. Illustrated by James MacDonald. New York: E. P. Dutton and Company, 1950. Pp. 185. \$2.50.

This clear and simply written account of the heroic struggles of Jamestown's first settlers is based on original records and the findings of recent historical research. Powhatan dealing with the settlers, John Smith's adventures, and the romance of Pocahontas and John Rolfe are highlights of this dramatic period. Although non-fiction, the young reader will find it as exciting as a modern adventure story.

E. J. W.

Farmer in the Sky. By Robert A. Heinlein. Illustrated by Clifford Geary. New York: Charles Scribner's Sons, 1950. Pp. 216. \$2.50.

Any teenager who has ever dreamed of living on another planet will thoroughly enjoy this account of the trip by space ship and the colonization of Ganymede,

Jupiter III. Although life there is rugged, Bill's family decides to remain because food is plentiful. The style of writing, seemingly accurate scientific data, and detailed descriptions contribute to the illusion of plausibility. This is superior to the usual science-fiction.

E. J. W.

The Dark Adventure. By Howard Pease. New York: Doubleday and Company, 1950. Pp. 229. \$2.50.

"Hot rod gangs," "boys on the prowl," and selling of marihuana cigarettes to high school students are some of the ingredients of Johnny Stevens' story. An automobile accident results in Johnny's loss of memory and forces him to hitch-hike back and forth across the country in search of his identity. His friendship with Tony, a wealthy man's son, caused Johnny to be falsely accused of selling marihuana cigarettes. A good adventure story, based on facts and told with impact.

E. J. W.

Teen-Age Gridiron Stories. Edited by Josh Furman. Illustrated by Richard Osborne. New York: Lantern Press, 1950. Pp. 250. \$2.50.

These ten stories by well-known authors not only emphasize the qualities of good sportsmanship, clean competition, fair play, and loyalty but give attention to the official rules that govern football. Although the stories follow the same formula the teen-age sport's fan who enjoys a good football yarn will find them pleasing.

E. J. W.

Jackie Robinson. By Bill Roeder. New York: A. S. Barnes and Company, 1950. Pp. 183. \$2.50.

This is the story of two people: Robinson the ball player, who in four years became the most valuable player in the National League, and Robinson, the man, the first Negro to play in organized baseball. Colored by baseball anecdotes and excitement, it is a good sports story, but more than that, it is a story of self-discipline and successful adjustment to the unsolved problems of tolerance in race relations.

E. K. C.

Carnival Gypsy. By Dorothy Gilman Butters. Philadelphia: Macrae-Smith, 1950. Pp. 217. \$2.50.

Capri Maccomb, a fifteen-year-old girl, and her mother inherit a small carnival. They determine to manage it for fun and profit even though a mysterious villain tries to thwart them in a series of small disasters. Action, mystery, and the excitement and color of carnival life give it distinction and interest for the teen-age groups.

E. K. C.

The Boatswain's Boy. By Robert C. Du Soe. Illustrated by Arthur Harper. New York: Longmans, Green and Company, 1950. Pp. 227. \$2.25.

Young Jonithan Amery, newly assigned midshipman on the U. S. S. Constitution, is kidnapped and forced to serve as the boatswain's boy on the privateer, Emily Abbot, until a camouflaged British Navy ship sinks her. Pressed into service by the British, Jonithan and his two buddies are rescued by the American ship, the United States. Jonithan's efforts to become a midshipman of good standing and a worthy leader of men delineates the part played by youth in our nautical history. Excellent for the older reader.

E. J. W.

On the Air, A Story of Television. By Jack Bechdolt. New York: E. P. Dutton and Company, Inc., 1950. \$2.50.

Paul Oakley, piano player, teams up with two dancers, Cassie and Frank Sommers, to become Greenwich Village's youthful television trio. Such problems as Mrs. Sommers' illness, Frank's gambling, and a lover's quarrel are so handled by kind and understanding Paul that a happy ending is possible. The love story and the glamor of television fame will appeal to the teen-agers.

E. J. W.

The Captain's Daughter. By Elizabeth Coatsworth. Illustrated by Ralph Ray. New York: Macmillan Company, 1950. \$2.50.

Although well written, the solutions to Janet's love problems seem unreal because the author fails to portray with conviction the transformation of a headstrong girl to a mature young woman. Varied scenes of a voyage to the Orient and a richly detailed visit to a Korean Buddhist monastery provide colorful episodes. The story lacks developmental values.

E. J. W.

To Tell Your Love. By Mary Stolz. New York: Harper and Brothers, 1950. Pp. 243. \$2.50.

The summer Anne was seventeen saw the ending of her first love affair. Each of Anne's family endear themselves to the reader with their various problems and idiosyncrasies as they sympathize silently with Anne but help her to continue a normal life until she has become adjusted.

E. R.

Winter Wedding. By Martha Barnhart Harper. New York: Longmans, Green and Company, 1950. Pp. 266. \$2.50.

The Barnhart family bid goodbye to the oldest daughter, Belle, who has been bereaved of her sweetheart during the Civil War. After a year of teaching in rural Iowa and an occasional trip to Davenport, Belle returns to Pennsylvania to be married to the young war veteran she has met. Older girls will enjoy the love interest and appreciate the adjustment problems of this sequel to *Bittersweet*.

E. R.

Mystery Beyond the Wall. By Ellsworth Newcomb. New York: E. P. Dutton and Company, 1950. Pp. 192. \$2.25.

In the fourth book of the Joan Andrews series, thirteen year old Judy's amateur methods of solving the mystery of Robin Hill almost bring disaster to the family. Joan overcomes her selfishness and develops a more mature attitude toward her forthcoming marriage when Bill's career as a pilot is threatened by poor eyesight. The story depicts good family relations. Combination of mystery and love interest will appeal to the teen-agers.

E. J. W.

Arctic Venture. By Kenneth Gilbert. Illustrated by Clifford N. Geary. New York: Henry Holt and Company, 1950. Pp. 147. \$2.50.

Fighting the threat of mutiny and bombastic blizzards, the trading schooner Aleut is marooned in an autumn ice floe along the North Alaskan coast. Thrilling adventure story, with vivid descriptions of Eskimo life and Arctic scenery.

R. W.

Three Ships Came Sailing In, A Story of John Smith's Jamestown. By Miriam Evangeline Mason. Illustrated by Charles V. John. Indianapolis: The Bobbs-Merrill Company, Inc., 1950. Pp. 246. \$2.50.

Dr. Russell and his young apprentice, Martin Wynne were among those who accompanied John Smith to Virginia in 1606. In early Jamestown, Martin learned that all was not adventure as he had anticipated. However, courage helped him face malaria, attacks by Indians, hunger, jealousy, and intrigue. He assisted the doctor, mixed medicines from native herbs, and continued his studies in surgery and *physicke*. Although John Smith has been somewhat idealized and historical sequences are not too clearly defined, the author has made life in early Jamestown seem real. For ages ten to fourteen.

E. M. H.

The Family Today. Edited by Lyman Bryson et al. Minneapolis: University of Minnesota Press, 1950. Pp. 169. \$2.50.

This unusual but misnamed book contains lesson plans, work materials, and a valuable bibliography for twenty-two units in education for family living. Intended as suggestive rather than as final projects, the units would, with a few exceptions, be most suitable for use with adolescents beyond high school age. While the units are stimulating one feels they would be of more concrete help, and perhaps even somewhat revised, had any experimentation with the units in actual group situations been reported.

B. B. P.

Tests and Drills in Spanish Grammar. By Juvenal L. Angel and Robert J. Dixon. New York: Latin American Institute Press, 1950. Pp. 216. \$1.60.

This book would be useful as a review text, whether for a class or for an individual student. The rules and explanations are given in English. The exercises, entirely in Spanish, are comprehensive, abundant, and varied. Although the emphasis is on grammar, the exercises offer excellent repetition of Spanish words and idiomatic word patterns.

D. F. R.

Idaho Sprout. By John Baumann. Illustrated by Lee Townsend. New York: William Morrow and Company, 1950. Pp. 250. \$2.50.

This excellent story is based on the author's adult novel, *Old Man Crow's Son*. Among the fine things it contains are the harmonious relationship which existed between the "Sprout" and his "Old Man" and between him and his older brothers, Herb and Cliff; a relationship based on the understanding and respect which each had for the other. The novel is filled, too, with the adventure associated with hunting, fishing, trapping, and the breaking of untamed horses—all in the wild Idaho ranch country. The laws of conservation were observed, and the ranchers did not kill game merely for the sport of it. One of the finest portions in the book is that in which the "Old Man" gives reassurance and guidance to the "Sprout" when he feels that he has

failed to measure up to all that his father expected of him. For seventh grade and up. E. M. H.

Great Short Stories. Edited by Wilbur Schramm. New York: Harcourt, Brace and Company, 1950. Pp. 536. \$1.72.

Mr. Schramm has collected fifteen American, eight English, and five continental stories for use in high school classes. There is a fifty page introduction, a glossary of critical terms, and a ten-page bibliography of stories on the same level. Each story in turn is introduced by a sketch of the author, and is followed by a set of questions and suggested further readings. The elaborate machinery for teaching raises the question as to whether the teacher is a *teacher* or a robot, whether both teacher and student wouldn't be better off asking their own questions. J. S. C.

FOR YOUNGER CHILDREN

King Philip, The Indian Chief. By Esther Averill. Illustrated by Vera Belsky. New York: Harper and Brothers, 1950. Pp. 147. \$2.50.

This biography of an Indian chief is really a short history of the Indians living in New England during the early days of its settlement. The ungrateful colonists were quick to forget that Massasoit, Philip's father, had been their benefactor and savior in those first desperate years. The newcomers pushed the Indians off the lands by threats and by promises seldom kept, until in desperation King Philip tried to hold his few remaining acres by force. The ignominious actions of our early settlers is a phase of history too often neglected. The thoughtful reader will be distressed by the inhuman treatment accorded these original friendly owners of the land. The settlers called the Indians savages but one wonders which were the savages.

E. G. M.

Chip the Dam Builder. By Jim Kjelgaard. Illustrated by Ralph Ray. New York: Holiday House, 1950. Pp. 233. \$2.50.

The beaver, Chip, and his mate Slek, are as real and engaging as any human characters around which a tale has been spun. The author has caught the drama and suspense which exist in a beaver's fight for survival, and has interestingly woven into his narrative the care with which a beaver selects the site for his lodge; the skill which he displays in its building; the care which is given his young; his method of announcing danger to the beaver community; and many other items. Through Ebony, the black beaver, he shows that beaver communities also have improvident residents; and through Chip's and Slek's kits indicates that beaver parents have trials and heartaches. For fifth grade and up.

E. M. H.

Thad Owen. By Hazel Wilson. Illustrated by William Sharp. New York: Abingdon-Cokesbury Press, 1950. Pp. 191. \$2.50.

Thad Owen went hunting without his parents' knowledge or permission and accidentally killed Mr. Gleason's Jersey cow. He kept the matter secret until he almost became lost in a snow storm—again, because he disobeyed. His fear caused him to confess to Mr. Gleason and a long stint of working for the Gleasons followed. His love for the colt, Monday, was the only bright spot in this period of his life, and the colt figured pleasantly in his future, also. The author has presented some glimpses of wholesome family life but it is unfortunate that she has given such an unfavorable picture of school life. One feels, too, that this is a story about a boy, rather than one for boys. For grades three to five.

E. M. H.

Washington Adventure. By Stockton V. Banks. Illustrated by Henry C. Pitz. New York: Whittlesey House, 1950. Pp. 191. \$2.50.

This novel contains interesting glimpses of Washington, D. C., as it was in 1800: the new Capitol and Treasury buildings; new Government offices, called the Six Buildings; and the erection of the President's House. Young David Cameron, who had come here to live with his brother Robert, and many of the other characters are realistically portrayed, but the plot lacks coherence and is ambiguous at various points in its solution. However, the story ends on a patriotic note through its portrayal of the reception given John Adams, who had recently arrived to carry on his presidential duties in the new Capitol. For grades four to six.

E. M. H.

Abraham Lincoln: An Initial Biography. By Genevieve Foster. New York: Charles Scribner's Sons, 1950. Pp. 111. \$2.00.

It is not easy to conceive another approach to the subject of this biography; so much has already been said in so many ways. Nevertheless, here is a real contribution, one that has caught the spirit of Lincoln and his day and through appropriate style and vocabulary reproduced it for young readers. Unusual illustrations add the final convincing touch. Simple, swift moving, and informative, it should become a favorite biography for children. For fourth grade and up.

L. M. J.

Nine Tales of Coyote. By Fran Martin. Illustrated by Dorothy McEntee. New York: Harper and Brothers, 1950. Pp. 60. \$2.00.

These are authentic legends selected from the folklore of the Nez Perce Indians of the Northwestern United States. The colorful stories are enhanced by striking illustrations. Excellent readings for age nine to twelve.

L. M. J.

Passage to America, The Story of the Great Migrations. By Katherine B. Shippen. New York: Harper and Brothers, 1950. Pp. 211. \$2.50.

A fascinating story of the synthesis of the American cultural patterns. Vivid descriptions of the conditions which prompted peoples to leave their old world homes, the realities of their sacrifices, their patient sufferings on the long and uncertain journeys, the misfortunes and obstacles after arrival, and finally their adaptations to a new way of life, subtly yet effectively give insight into those many and varied contributions which have enriched our America. A history, human with the feelings and hopes of peoples, broadens the concept of our heritage and should help us appreciate America's destiny.

E. G. M.

The Shining Shooter. By Marion Lewis Renick. Illustrated by Dwight Logan. New York: Charles Scribner's Sons, 1950. Pp. 218. \$2.25.

In learning to play marbles well Charles Tipton, Tip, had to learn to take his time on every shot, to think out how he wanted to make his play, that skill comes through practice, and that rules of sportmanship must be observed. His magician friend, the Great El-Mar, was his teacher; those who encouraged with their interest and sympathy were Mom; his street-cleaner friend, the Major; and his playmate, Sandra; while Squawker, the bully, served as a challenge to him. The characters are realistically portrayed; dialogue is natural; interest is well-sustained; and there are interesting bits about the history of marble playing. The last four pages give descriptions of games which may be played with marbles. For grades three to six. E. M. H.

The Golden Funny Book. A Big Golden Book. By Gertrude Crampton. Illustrated by J. P. Miller. New York: Simon and Schuster, Inc., 1950. Pp. 76. \$1.00.

This book presents intriguing material for children: jokes, funny stories, scrambled rhymes, hidden picture puzzles, and Mother Goose quizzes. The colored illustrations are simple and humorous. For the five-to-eight-year-old. D. E. W.

Who Dreams of Cheese? By Leonard Weisgard. New York: Charles Scribner's Sons, 1950. \$2.00.

Children's imaginations will be stimulated by the suggested dreams of animals, birds, and children. Each record of dreams is presented as a game in identification of the dreamer. The "story" part is given in well-chosen words and the pictures by the author are especially beautiful. To be read to the younger children. D. E. W.

The Three Silly Kittens. By Margot Austin. New York: E. P. Dutton and Company, 1950. Pp. 45. \$1.50.

Children will enjoy the obvious humor in the antics of Tom, Dick, and Harry who go through a series of silly adventures. The black and white illustrations, mostly full-page, are most amusing. For five- and six-year-olds. L. M. J.

The Calf That Flew Away. By André Dugo. New York: Henry Holt and Company, 1950. Pp. 32. \$2.00.

An amusing story about Molly, the small calf who ate the forbidden marsh grass and soon found herself floating high over rooftops and church steeples. The ensuing adventures and how Molly finally managed to get down will charm six- and seven-year-olds. The illustrations effectively add humor to the story. L. M. J.

Runaway Toys. By Inez Hogan. New York: E. P. Dutton and Company, Inc., 1950. \$1.75.

In this little fantasy, the toys that were not put away at night decided secretly to slip away and see the world; after some narrow escapes in a bewildering world they all went home convinced that they never more would roam. Good illustrations in red, yellow, and gray; perfect story for kindergarten-primary children. L. M. J.

Adventuring with Pioneers. By Mary Browning. Boston: D. C. Heath and Company, 1949. Pp. 152. \$1.60.

This is an interesting, simply told story of two pioneer families living near Harrodsburg, Kentucky, in 1798. The adventures of these families, their problems and hardships, as well as their simple pleasures are told in a series of episodes which make excellent supplementary reading, particularly for middle-grade children studying United States history. The book is well written and illustrated and should have wide appeal for both boys and girls. E. C. S.

The Book of the Year. By Fritz Peters. Illustrated by Ilonka Karasz. New York: Harper and Brothers, 1950. Pp. 52. \$2.50.

In prose as beautiful as poetry, life in the country is portrayed during the various seasons. In January the house speaks, in February the brook, in March the wind, in April the crows, and so on through the year. The thoughts and emotions expressed are exquisite and the illustrations in pen-and-ink are a delightful combination of the visual elements of the text and design. D. E. W.

Ourselves and Others. By Seward E. Daw and Vivian W. Lundberg. Illustrated by A. K. Bilder. Chicago: Beckley-Cardy Company, 1949. Pp. 283. \$1.48.

This book is divided into six units of several stories each: Living in America; Building for Health; Science in Nature; America's Past; Stop! Look! Listen!; From East to West. The content of the stories is excellent; much factual information of importance is included, and the book is well illustrated. The writing, however, particularly the conversation passages, appears to be somewhat forced and stilted. E. C. S.

Here and There and Everywhere. By Alice Gall and Fleming Crew. Illustrated by Nils Hogner. New York: Oxford University Press, 1950. Pp. 56. \$1.50.

Valuable facts concerning nine small creatures of the animal world are presented in brief, informative, nature stories for use in primary and intermediate grades. Effective dialog and several realistic illustrations further enhance the simple charm of the book. R. W.

Rosa-Too-Little. By Sue Felt. New York: Doubleday and Company, Inc., 1950. Pp. 30. \$2.00.

Wishing has a special place in the life of every five-year-old girl; but sometimes it is not enough, especially when owning a library card and joining a story club necessitates writing your name. Rosa knew all of this. With secret plans and mother's help, her first day at school culminated the earnest efforts of an entire summer. Read aloud, this story has real value in its delicate appeal to youngsters in the kindergarten. R. W.

Owls. By Herbert S. Zim. Illustrated by James Gordon Irving. New York: Morrow Junior Books, 1950. \$2.00.

Here is a fascinating book about owls, big owls and little owls, in which their physical characteristics and habits are scientifically yet simply given. Middle-graders will enjoy reading the book and adults also will find it intriguing. It is lavishly illustrated with magnificent black and white drawings and is set in clear, large type. D. E. W.

Honey for Tea. By Patience Strong. Illustrated by Susan B. Pearce. New York: E. P. Dutton and Company, Inc., 1950. Pp. 47. \$1.50.

A collection of thirty poems about everyday subjects familiar to young children. A few of the poems with a distinctly English flavor may not be appreciated by American children. To be read to children in the primary grades. L. M. J.

Shoe for My Pony. By Margaret Friskey. Illustrated by Jean Edgerton. Chicago: Childrens Press, Inc., 1950. Pp. 24. \$2.00.

This is a delightful story of a country boy's search for a "new shoe, a bright shoe, a nail-it-on-tight shoe" for his pony. In his search he meets many farm animals who have no shoes—a duck, a lamb, a kitten, a rabbit, a cow, an owl, some hens, and some squirrels. Finally he finds a blacksmith who puts a new shoe on his pony and off he goes "clippity clop, clippity, clippity, clippity clop." S. E. S.

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EDUCATIONAL CONFERENCES AND CONVENTIONS

June 28-July 2: National Science Teachers Association,
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July 1-7: National Education Association, San Francisco,
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July 9-20: Department of Elementary School Principals,
National Education Association, San Francisco,
California.

July 9-20: Department of Classroom Teachers, National
Education Association, Oakland, California.

July 15-August 3: National Training Laboratory in
Group Development, Second Session, Gould Academy,
Bethel, Maine.

July 23-August 17: Institute of Organization Leadership,
National Education Association, The American
University, Washington, D. C.

August 23-29: Institute for Teachers of Mathematics,
Sponsored by the Association of Teachers of
Mathematics in New England, at Connecticut College,
New London, Connecticut.

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